INVENTOR SEARCH

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=> d his l67

     (FILE 'HCAPLUS' ENTERED AT 15:07:34 ON 09 NOV 2010)
L67          10 S L64 AND L66

=> d que l67
L2          776 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  ("MIKAMI,
                KOICHI"/AU OR "SAKAMOTO, HIROTOSHI"/AU OR "YOSHIKATA,
                KUNIAKI"/AU)
L3              QUE  SPE=ON  ABB=ON  PLU=ON  MIKAMI K?/AU
L4              QUE  SPE=ON  ABB=ON  PLU=ON  SAKAMOTO H?/AU
L5              QUE  SPE=ON  ABB=ON  PLU=ON  YOSHIKATA K?/AU
L6              QUE  SPE=ON  ABB=ON  PLU=ON  L3 AND L4 AND L5
L7            4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L3 AND L4 AND
                L5
L8        16396 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  FUEL?(6A)CELL?
                (6A)SOLID?(6A)OXID?
L9        16030 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (FUEL?(3A)CELL
                ?)(L)(SOLID?(2A)OXID?)
L10       16595 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L8 OR L9
L12             QUE  SPE=ON  ABB=ON  PLU=ON  SUBSTRAT? OR SURFACE? OR B
                ASE# OR SUBSTRUCT? OR UNDERSTRUCTUR? OR UNDERLAY? OR FO
                UNDATION? OR PANE? OR DISK? OR DISC# OR WAFER? OR PLATE
                 OR PLATES
L14             QUE  SPE=ON  ABB=ON  PLU=ON  ELECTROLYT?
L15        8851 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L10 AND L12
L16        4809 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L15 AND L14
L17             QUE  SPE=ON  ABB=ON  PLU=ON  ELECTROD? OR CATHOD? OR AN
                OD? OR ELECTROD?(2A)(POSITIVE OR NEGATIVE)
L18        3633 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L16 AND L17
L19        1528 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L18 AND
                (CATHOD? OR ELECTROD?(2A)POSITIVE) AND (ANOD? OR
                ELECTROD?(2A)NEGATIVE)
L22        3633 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L18 OR L19
L23             QUE  SPE=ON  ABB=ON  PLU=ON  (SAME OR OPPOSITE)(3A)(SID
                E OR SURFACE)
L24          77 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L22 AND L23
L25             QUE  SPE=ON  ABB=ON  PLU=ON  (SPACE OR DISTAN? OR LENGT
                H OR SEPARAT?)(3A)(MEASUR? OR PREDETERMIN? OR DETERMIN?
                 OR SPECIF? OR EQUAL? OR EQUI? OR UNIFORM?)
L26             QUE  SPE=ON  ABB=ON  PLU=ON  EQUIDIS? OR EQUI?(A)DISTAN
                ? OR EQUIDISTAN?
L27           9 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L22 AND (L25
                OR L26)
L29          86 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L24 OR L27
L30             QUE  SPE=ON  ABB=ON  PLU=ON  SPACE? OR SPACING? OR DIST
                AN? OR LENGTH? OR SEPARAT? OR MEASUR? OR PREDETERMIN? O
                R DETERMIN? OR SPECIF? OR EQUAL? OR EQUI? OR UNIFORM? O
                R EQUI?(A)DISTAN? OR EQUIDISTAN?
L31        1579 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L22 AND L30
L32          48 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L29 AND L31
L33          86 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L29 OR L32
L35             QUE  SPE=ON  ABB=ON  PLU=ON  ELEMENT? OR BODY? OR UNIT?
                 OR ASSEMBL?
L36         370 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L31 AND L35
L37          21 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L36 AND L33
L39          86 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L33 OR L37
L40             QUE  SPE=ON  ABB=ON  PLU=ON  INSULAT?
L41           4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L39 AND L40
L42          52 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L31 AND L40
L43         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L37 OR L39 OR
                L41 OR L42
L44             QUE  SPE=ON  ABB=ON  PLU=ON  PLURAL? OR MULTI? OR SEVER
                AL? OR MANY
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L45          39 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L43 AND L44
L46         105 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L39 OR L41 OR
                L45
L47         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L46 OR L43
L48             QUE  SPE=ON  ABB=ON  PLU=ON  PRINT?
L49           8 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L47 AND L48
L50             QUE  SPE=ON  ABB=ON  PLU=ON  ADHESI? OR ADHERE? OR STIC
                K? OR CLING? OR BOND? OR CEMENT? OR CONGLUTIN? OR AGGLU
                TIN? OR MUCILAG? OR TACK? OR GLUE? OR GLUING OR PASTE?
                OR PASTING OR GUM? OR HOLD? OR GRIP? OR GRASP? OR BIND?
                 OR SEAL?
L51          34 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L47 AND L50
L52             QUE  SPE=ON  ABB=ON  PLU=ON  GROOVE? OR FURROW? OR CLEF
                T#### OR GRID? OR MESH### OR SCORE## OR INDENT? OR INCI
                S? OR STRIAT? OR GOUGE? OR TRENCH? OR TROUGH? OR RUT###
                # OR RIBBED?
L53             QUE  SPE=ON  ABB=ON  PLU=ON  CHANNEL? OR CONDUIT? OR DU
                CT? OR PASSAGE? OR TROUGH? OR TUNNEL?
L54          38 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L47 AND (L52
                OR L53)
L55         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L47 OR L49 OR
                L51 OR L54
L56             QUE  SPE=ON  ABB=ON  PLU=ON  DISPOS? OR ATTACH? OR ADHE
                R? OR ADSOR? OR ABSOR? OR PART? OR ADJ? OR SINGL?
L57          66 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L55 AND L56
L58             QUE  SPE=ON  ABB=ON  PLU=ON  CONNECT? OR INTERCONNECT?
                OR INTER?(A)CONNECT?
L59         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L55 OR L57
L60          49 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L59 AND L58
L61         112 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L60 OR L39
L63         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L59 OR L60 OR
                L61
L64          10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L63 AND ((L2
                OR L3 OR L4 OR L5 OR L6 OR L7))
L65             QUE  SPE=ON  ABB=ON  PLU=ON  FUELCELL? OR (FUEL?(2A)CEL
                L?) OR FC OR SOFC OR DFC OR PEMFC
L66         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L63 AND L65
L67          10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND L66
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INVENTOR SEARCH RESULTS

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L67 ANSWER 1 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2009:1296298 HCAPLUS Full-text
DOCUMENT NUMBER: 151:474568
TITLE: Solid oxide fuel cell with current collector having irregularities on surface, disposed on electrode having irregular surface, and manufacture of same cell
INVENTOR(S): Kotani, Kazushi; Yoshikata, Kuniaki; Watanabe, Junko
PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2009245897	A	20091022	JP 2008-94131	2008 0331

PRIORITY APPLN. INFO.: JP 2008-94131 2008 0331

ED Entered STN: 23 Oct 2009
AB The title cell provided with a current collector having irregularities on the surface comprises an electrolyte held between an anode and cathode, wherein at least one of the electrodes is structured to allow the current collector to be attached thereto, and has irregularities which can be engaged with those on the collector, at least on part of the surface to which the collector is attached . The title method for manufacture of the title cell comprises steps (1) for preparing the electrolyte; and (2-1) for forming the anode on one side of the electrolyte and (2-2) for forming the cathode on the other side of the electrolyte, wherein at least one of the steps (2-1) and (2-2) comprises steps for disposing the electrode material on the electrolyte by printing; for drying the material; providing irregularities on the material; and for sintering the material. The cell has reduced contact resistance between the electrode and current collector, thereby improving power generation efficiency.
IPCI H01M0004-86 [I,A]; H01M0008-02 [I,A]; H01M0008-12 [N,A]
IPCR H01M0004-86 [I,C]; H01M0004-86 [I,A]; H01M0008-02 [I,C]; H01M0008-02 [I,A]; H01M0008-12 [N,C]; H01M0008-12 [N,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell
current collector electrode surface roughness
IT Surface roughness
(current collector and electrode; solid oxide fuel cell with surface roughness on current collector and electrode)
IT Electric conductors
(current collectors; solid oxide fuel cell with surface roughness on current collector and electrode)
IT Embossing
(on current collector and electrode; solid oxide fuel cell with surface roughness on current collector and electrode)

IT Fuel cell electrodes
(solid oxide fuel cell
with surface roughness on current collector and
electrode)
IT Fuel cells
(solid oxide; solid oxide
fuel cell with surface roughness on
current collector and electrode)
IT 1313-99-1, Nickel oxide (NiO), uses 681441-22-5,
Cerium gadolinium oxide (Ce0.9Gd0.1O1.9)
RL: PEP (Physical, engineering or chemical process); TEM
(Technical or engineered material use); PROC (Process); USES
(Uses)
(anode containing; solid oxide
fuel cell with surface roughness on
current collector and electrode)
IT 148595-66-8, Cobalt iron lanthanum strontium oxide
(Co0.2Fe0.8La0.6Sr0.4O3)
RL: PEP (Physical, engineering or chemical process); TEM
(Technical or engineered material use); PROC (Process); USES
(Uses)
(cathode; solid oxide
fuel cell with surface roughness on
current collector and electrode)
IT 7440-06-4, Platinum, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(current collectors; solid oxide
fuel cell with surface roughness on
current collector and electrode)

L67 ANSWER 2 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2008:1250520 HCAPLUS Full-text
DOCUMENT NUMBER: 149:451890
TITLE: Solid oxide fuel
cells (SOFC) with mechanical
strength
INVENTOR(S): Yoshikata, Kuniaki; Kotani, Kazushi
PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2008251383	A	20081016	JP 2007-92299	2007 0330
PRIORITY APPLN. INFO.:			JP 2007-92299	2007 0330

ED Entered STN: 17 Oct 2008
AB The title SOFC comprises a support substrate equipped with ≥1 hole(s), a fuel electrode covering the hole(s), an electrolyte, and an oxide electrode formed in the order and a porous current collector thicker than the substrate is formed under filling the hole(s) in the substrate. Low-cost elec. insulating materials can be used as the substrate .
IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]
IPCR H01M0008-02 [I,C]; H01M0008-02 [I,A]; H01M0008-12 [I,C];
H01M0008-12 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell low
cost high strength; porous current collector SOFC

structure; low cost insulating substrate
SOFC structure
IT Electric conductors
(porous; low-cost SOFC formed on mech. strong elec. insulating substrates having through holes filled with and covered with porous current collector layer)
IT Fuel cells
(solid oxide; low-cost SOFC formed on mech. strong elec. insulating substrates having through holes filled with and covered with porous current collector layer)
IT Electric insulators
(substrates; low-cost SOFC formed on mech. strong elec. insulating substrates having through holes filled with and covered with porous current collector layer)

L67 ANSWER 3 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:1420977 HCAPLUS Full-text
DOCUMENT NUMBER: 148:36556
TITLE: Thin solid oxide fuel cell (SOFC) with thin-film electrolyte membrane and manufacture thereof
INVENTOR(S): Yoshikata, Kuniaki; Sakamoto, Hirotoshi; Kotani, Kazushi
PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007323957	A	20071213	JP 2006-152907	2006 0531

PRIORITY APPLN. INFO.: JP 2006-152907 2006 0531

ED Entered STN: 13 Dec 2007
AB The title SOFC comprises a substrate supporting a thin-film anode (or cathode), a thin-film electrolyte membrane, and a thin-film cathode (or anode) in the order and the substrate is provided with a gas passage running through the opposite side of the substrate and the anode (or cathode). Method for manufacture of the SOFC is also claimed. The passage may be prepared by etching and the thin layers may be formed by printing.
IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]
IPCR H01M0008-02 [I,C]; H01M0008-02 [I,A]; H01M0008-12 [I,C]; H01M0008-12 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST thin film solid oxide fuel cell; SOFC thin film electrode electrolyte printing
IT Fuel cells
(solid oxide; structure of thin-film SOFC and its manufacture)
IT Etching
Screen printing
(structure of thin-film SOFC and its manufacture)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L67 ANSWER 4 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2007:1178611 HCAPLUS Full-text
DOCUMENT NUMBER: 147:472145
TITLE: The solid oxide electrolyte fuel cell and its manufacturing method
INVENTOR(S): Sakamoto, Hirotoshi; Yoshikata, Kuniaki; Kotani, Kazushi
PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007273429	A	20071018	JP 2006-101179	2006 0331

PRIORITY APPLN. INFO.: JP 2006-101179 2006 0331

ED Entered STN: 19 Oct 2007
AB The disclosed fuel cell comprises a oxide solid oxide electrolyte film, air and fuel electrodes formed on opposite surfaces of the electrolyte, and porous elec. conductive supports formed on the electrodes. The curling of the fuel cell unit during manufacturing is effectively prevented by the supports. IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]
IPCR H01M0008-02 [I,C]; H01M0008-02 [I,A]; H01M0008-12 [I,C]; H01M0008-12 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid electrolyte fuel cell manuf curling prevention
IT Fuel cells
(solid electrolyte; curling preventive supports for)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L67 ANSWER 5 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:11643 HCAPLUS Full-text
DOCUMENT NUMBER: 144:72335
TITLE: Solid oxide fuel cell and its base material
INVENTOR(S): Yoshikata, Kuniaki; Sakamoto, Hirotoshi
PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006004672	A	20060105	JP 2004-177283	2004 0615

PRIORITY APPLN. INFO.: JP 2004-177283 2004 0615

ED Entered STN: 06 Jan 2006

AB The base material has (1) an electrolyte, anodes set on one side of the electrolyte, and cathodes set on the same side to have fixed intervals between the anodes and the cathodes or (2) a substrate, electrolytes on the substrate, anodes and cathodes on the electrolytes, wherein the electrodes have approx. equilaterally polygonal or round shape. The fuel cell has the base material and interconnectors for connecting electrodes on the base material. Electron conduction loss in current collection is decreased in the cell to improve power generation efficiency. IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]; H01M0008-24 [I,A]

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST solid oxide fuel cell
polygonal round electrode interconnector

IT Interconnections, electric
(cell with; solid oxide fuel cell having polygonal or round electrodes on the same side of electrolyte)

IT Fuel cell electrodes
(solid oxide fuel cell having polygonal or round electrodes on the same side of electrolyte)

IT Fuel cells
(solid oxide; solid oxide fuel cell having polygonal or round electrodes on the same side of electrolyte)

IT 1313-99-1, Nickel oxide (NiO), uses 116875-84-4, Cerium samarium oxide (Ce0.8Sm0.2O1.9)
RL: DEV (Device component use); USES (Uses)
(anode containing; solid oxide fuel cell having polygonal or round electrodes on the same side of electrolyte)

IT 59989-70-7, Cobalt samarium strontium oxide (CoSm0.5Sr0.5O3)
RL: DEV (Device component use); USES (Uses)
(cathode; solid oxide fuel cell having polygonal or round electrodes on the same side of electrolyte)

IT 681441-22-5, Cerium gadolinium oxide (Ce0.9Gd0.1O1.9)
RL: DEV (Device component use); USES (Uses)
(electrolyte; solid oxide fuel cell having polygonal or round electrodes on the same side of electrolyte)

IT 7440-57-5, Gold, uses
RL: DEV (Device component use); USES (Uses)
(interconnector; solid oxide fuel cell having polygonal or round electrodes on the same side of electrolyte)

IT 1344-28-1, Alumina, uses
RL: DEV (Device component use); USES (Uses)
(substrate; solid oxide fuel cell having polygonal or round electrodes on the same side of electrolyte)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L67 ANSWER 6 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:1074821 HCAPLUS Full-text
DOCUMENT NUMBER: 143:329209
TITLE: Solid oxide fuel cell with high output and its manufacture
INVENTOR(S): Yoshikata, Kuniaki; Sakamoto,

Hirotoshi
PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 10 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005276535	A	20051006	JP 2004-85790	2004 0323

PRIORITY APPLN. INFO.: JP 2004-85790 2004 0323

ED Entered STN: 07 Oct 2005
AB The fuel cell is manufactured by the following steps: (1) forming a fuel electrode paste containing Ni oxide, Ce-based oxide, and binder, (2) forming an air electrode paste containing perovskite-type oxide and binder, (3) applying the fuel electrode paste on one of the surfaces of an electrolyte and sintering at 1200-1600°, and (4) applying the air electrode paste on the same surface and sintering at 1000-1300°. The obtained fuel cell is also claimed.
IPCI H01M0004-88 [ICM,7]; H01M0008-02 [ICS,7]; H01M0008-12 [ICS,7]
IPCR H01M0004-88 [I,A]; H01M0004-88 [I,C*]; H01M0008-02 [I,A]; H01M0008-02 [I,C*]; H01M0008-12 [I,A]; H01M0008-12 [I,C*]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST electrode paste sintering solid oxide fuel cell manuf; solid oxide fuel cell high output
IT Fuel cell anodes
Fuel cell cathodes
Sintering
(manufacture of solid oxide fuel cell with high output by sintering of electrode pastes on electrolyte)
IT Fuel cells
(solid oxide; manufacture of solid oxide fuel cell with high output by sintering of electrode pastes on electrolyte)
IT 59989-70-7, Cobalt samarium strontium oxide (CoSm0.5Sr0.5O3)
RL: DEV (Device component use); USES (Uses)
(air electrode; manufacture of solid oxide fuel cell with high output by sintering of electrode pastes on electrolyte)
IT 1313-99-1, Nickel oxide (NiO), uses
RL: CAT (Catalyst use); DEV (Device component use); USES (Uses)
(fuel electrode; manufacture of solid oxide fuel cell with high output by sintering of electrode pastes on electrolyte)
IT 116875-84-4, Cerium samarium oxide (Ce0.8Sm0.2O1.9)
RL: DEV (Device component use); USES (Uses)
(fuel electrode; manufacture of solid oxide fuel cell with high output by sintering of electrode pastes on electrolyte)

L67 ANSWER 7 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:546312 HCAPLUS Full-text
DOCUMENT NUMBER: 143:81082
TITLE: Solid oxide fuel

TITLE: cell with improved wiring configuration and manufacture thereof
INVENTOR(S): Sakamoto, Hirotoshi; Yoshikata, Kuniaki; Mikami, Koichi
PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005166561	A	20050623	JP 2003-406600	2003 1204
JP 4379584	B2	20091209		

PRIORITY APPLN. INFO.: JP 2003-406600 2003 1204

ED Entered STN: 24 Jun 2005
AB A fuel cell comprises an electrolyte , a plurality of electrodes disposed on 1 surface of the electrolyte and composed of fuel electrodes and air electrodes, and interconnectors for connecting the electrodes. The interconnectors have a crossing section where they cross, this section being at a distance from some of the electrodes. The crossing section is formed from a conductive wire, and an insulating layer can be formed between the crossing section and the electrodes. When the fuel cell is manufactured, a burn-out material can be used to install the interconnectors, and this material is then burned out to form a space between the interconnectors and the electrodes. The degree of freedom of wiring design is increased, while preventing short circuiting. IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]
IPCR H01M0008-02 [I,A]; H01M0008-02 [I,C*]; H01M0008-12 [I,A]; H01M0008-12 [I,C*]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell interconnection
IT Interconnections, electric
(solid oxide fuel cell with improved wiring configuration and manufacture thereof)
IT Fuel cells
(solid oxide; solid oxide fuel cell with improved wiring configuration and manufacture thereof)

L67 ANSWER 8 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:492978 HCAPLUS Full-text
DOCUMENT NUMBER: 143:10642
TITLE: Membrane-free solid oxide fuel cell
INVENTOR(S): Yoshikata, Kuniaki; Mikami, Koichi
PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005149815	A	20050609	JP 2003-383069	2003 1112

PRIORITY APPLN. INFO.: JP 2003-383069
2003
1112

ED Entered STN: 10 Jun 2005

AB The claimed fuel cell is equipped with ≥1 pair of an anode and a cathode formed on the same flat surface of a solid electrolyte, where the solid electrolyte surface is roughened at areas contacting with the anode and the cathode. The fuel cell provides high power output by the increased contact areas.

IPCI H01M0008-02 [ICM,7]; H01M0008-12 [ICS,7]
IPCR H01M0008-02 [I,A]; H01M0008-02 [I,C*]; H01M0008-12 [I,A];
H01M0008-12 [I,C*]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell
electrolyte surface roughening
IT Fuel cells
(solid oxide; surface roughening
of solid electrolyte in membrane-free
solid oxide fuel cell)
IT Fuel cell electrolytes
(surface roughening of solid
electrolyte in membrane-free solid
oxide fuel cell)
IT 55575-06-9, Cerium samarium oxide 192575-28-3, Cerium
gallium oxide
RL: DEV (Device component use); USES (Uses)
(electrolytes; surface roughening of
solid electrolyte in membrane-free
solid oxide fuel cell)

L67 ANSWER 9 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:16053 HCAPLUS Full-text
DOCUMENT NUMBER: 142:97505
TITLE: Solid oxide fuel
cell
INVENTOR(S): Yoshikata, Kuniaki; Mikami,
Koichi; Sakamoto, Hirotoshi
PATENT ASSIGNEE(S): Dai Nippon Printing Co., Ltd., Japan
SOURCE: PCT Int. Appl., 44 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005001970	A1	20050106	WO 2004-JP9347	2004 0625
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
JP 2005259604	A	20050922	JP 2004-71596	2004 0312

CA 2533564	A1	20050106	CA 2004-2533564	2004 0625
JP 2005038848	A	20050210	JP 2004-188485	2004 0625
DE 112004001144	T5	20060524	DE 2004-112004001144	2004 0625
CN 1813366	A	20060802	CN 2004-80017949	2004 0625
CN 100438168	C	20081126		
CN 101299466	A	20081105	CN 2008-10092363	2004 0625
JP 2005044792	A	20050217	JP 2004-197015	2004 0702
JP 2005056839	A	20050303	JP 2004-216151	2004 0723
US 20070248864	A1	20071025	US 2007-561789	2007 0315

PRIORITY APPLN. INFO.:	JP 2003-182618	A	2003 0626
	JP 2003-271191	A	2003 0704
	JP 2003-278485	A	2003 0723
	JP 2004-71596	A	2004 0312
	CN 2004-80017949	A3	2004 0625
	WO 2004-JP9347	W	2004 0625

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 07 Jan 2005

AB A solid oxide fuel cell is disclosed which has improved problems such as vulnerability and high cost conventional planar/tubular solid oxide fuel cells involved. The solid oxide fuel cell is a membrane-free solid oxide fuel cell to which a mixture gas of a fuel gas and an oxidant gas is supplied for generation of electricity, and comprises a substrate, an electrolyte which is arranged on one surface of the substrate, and at least one electrode body (E) which is composed of a fuel electrode and an air electrode arranged on the same surface of the electrolyte at a certain distance from each other.

IPCI H01M0008-02 [ICM,7]; H01M0008-12 [ICS,7]; H01M0008-24 [ICS,7]

IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-12 [I,C*]; H01M0008-12 [I,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 72, 76

ST solid oxide fuel cell
electrode interconnector

IT Fuel cell electrodes

Fuel cell separators
Interconnections, electric
(solid oxide fuel cell
electrode interconnector)
IT Fuel cells
(solid oxide; solid oxide
fuel cell electrode
interconnector)
REFERENCE COUNT: 7 THERE ARE 7 CITED REFERENCES AVAILABLE
FOR THIS RECORD. ALL CITATIONS AVAILABLE
IN THE RE FORMAT

L67 ANSWER 10 OF 10 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:588641 HCAPLUS Full-text
DOCUMENT NUMBER: 141:126364
TITLE: Fuel cell
INVENTOR(S): Yoshikata, Kuniaki; Mikami, Takekazu
PATENT ASSIGNEE(S): Dainippon Printing Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 2
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004207233	A	20040722	JP 2003-411076	2003 1209
JP 4431862	B2	20100317		
PRIORITY APPLN. INFO.:			JP 2002-356782 A	2002 1209

ED Entered STN: 23 Jul 2004
AB The fuel cell has ≥1 unit cell containing an electrolyte, a cathode, and an anode, and a substrate supporting the unit cell; where the electrolyte is located on 1 side of the substrate, and the cathode and anode are on that same side of the substrate to hold the electrolyte.
IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]; H01M0004-86 [I,A]
IPCR H01M0008-02 [I,A]; H01M0008-02 [I,C*]; H01M0008-12 [I,A];
H01M0008-12 [I,C*]; H01M0008-24 [I,A]; H01M0008-24 [I,C*];
H01M0004-86 [I,C]; H01M0004-86 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST structure fuel cell electrolyte
substrate support
IT Fuel cells
(structure of solid oxide fuel
cells containing supporting substrates for
electrolyte and electrodes)

TEXT SEARCH

```
=> d his l87

     (FILE 'HCAPLUS' ENTERED AT 15:07:34 ON 09 NOV 2010)
L87          30 S L86 AND L10
                SAV TEMP L87 WEI789HCP/A

=> d que l87
L2          776 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  ("MIKAMI,
                KOICHI"/AU OR "SAKAMOTO, HIROTOSHI"/AU OR "YOSHIKATA,
                KUNIAKI"/AU)
L3              QUE  SPE=ON  ABB=ON  PLU=ON  MIKAMI K?/AU
L4              QUE  SPE=ON  ABB=ON  PLU=ON  SAKAMOTO H?/AU
L5              QUE  SPE=ON  ABB=ON  PLU=ON  YOSHIKATA K?/AU
L6              QUE  SPE=ON  ABB=ON  PLU=ON  L3 AND L4 AND L5
L7            4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L3 AND L4 AND
                L5
L8        16396 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  FUEL?(6A)CELL?
                (6A)SOLID?(6A)OXID?
L9        16030 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  (FUEL?(3A)CELL
                ?)(L)(SOLID?(2A)OXID?)
L10       16595 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L8 OR L9
L12             QUE  SPE=ON  ABB=ON  PLU=ON  SUBSTRAT? OR SURFACE? OR B
                ASE# OR SUBSTRUCT? OR UNDERSTRUCTUR? OR UNDERLAY? OR FO
                UNDATION? OR PANE? OR DISK? OR DISC# OR WAFER? OR PLATE
                 OR PLATES
L14             QUE  SPE=ON  ABB=ON  PLU=ON  ELECTROLYT?
L15        8851 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L10 AND L12
L16        4809 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L15 AND L14
L17             QUE  SPE=ON  ABB=ON  PLU=ON  ELECTROD? OR CATHOD? OR AN
                OD? OR ELECTROD?(2A)(POSITIVE OR NEGATIVE)
L18        3633 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L16 AND L17
L19        1528 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L18 AND
                (CATHOD? OR ELECTROD?(2A)POSITIVE) AND (ANOD? OR
                ELECTROD?(2A)NEGATIVE)
L22        3633 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L18 OR L19
L23             QUE  SPE=ON  ABB=ON  PLU=ON  (SAME OR OPPOSITE)(3A)(SID
                E OR SURFACE)
L24          77 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L22 AND L23
L25             QUE  SPE=ON  ABB=ON  PLU=ON  (SPACE OR DISTAN? OR LENGT
                H OR SEPARAT?)(3A)(MEASUR? OR PREDETERMIN? OR DETERMIN?
                 OR SPECIF? OR EQUAL? OR EQUI? OR UNIFORM?)
L26             QUE  SPE=ON  ABB=ON  PLU=ON  EQUIDIS? OR EQUI?(A)DISTAN
                ? OR EQUIDISTAN?
L27           9 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L22 AND (L25
                OR L26)
L29          86 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L24 OR L27
L30             QUE  SPE=ON  ABB=ON  PLU=ON  SPACE? OR SPACING? OR DIST
                AN? OR LENGTH? OR SEPARAT? OR MEASUR? OR PREDETERMIN? O
                R DETERMIN? OR SPECIF? OR EQUAL? OR EQUI? OR UNIFORM? O
                R EQUI?(A)DISTAN? OR EQUIDISTAN?
L31        1579 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L22 AND L30
L32          48 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L29 AND L31
L33          86 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L29 OR L32
L35             QUE  SPE=ON  ABB=ON  PLU=ON  ELEMENT? OR BODY? OR UNIT?
                 OR ASSEMBL?
L36         370 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L31 AND L35
L37          21 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L36 AND L33
L39          86 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L33 OR L37
L40             QUE  SPE=ON  ABB=ON  PLU=ON  INSULAT?
L41           4 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L39 AND L40
L42          52 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L31 AND L40
L43         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L37 OR L39 OR
                L41 OR L42
L44             QUE  SPE=ON  ABB=ON  PLU=ON  PLURAL? OR MULTI? OR SEVER
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                AL? OR MANY
L45          39 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L43 AND L44
L46         105 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L39 OR L41 OR
                L45
L47         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L46 OR L43
L48             QUE  SPE=ON  ABB=ON  PLU=ON  PRINT?
L49           8 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L47 AND L48
L50             QUE  SPE=ON  ABB=ON  PLU=ON  ADHESI? OR ADHERE? OR STIC
                K? OR CLING? OR BOND? OR CEMENT? OR CONGLUTIN? OR AGGLU
                TIN? OR MUCILAG? OR TACK? OR GLUE? OR GLUING OR PASTE?
                OR PASTING OR GUM? OR HOLD? OR GRIP? OR GRASP? OR BIND?
                 OR SEAL?
L51          34 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L47 AND L50
L52             QUE  SPE=ON  ABB=ON  PLU=ON  GROOVE? OR FURROW? OR CLEF
                T#### OR GRID? OR MESH### OR SCORE## OR INDENT? OR INCI
                S? OR STRIAT? OR GOUGE? OR TRENCH? OR TROUGH? OR RUT###
                # OR RIBBED?
L53             QUE  SPE=ON  ABB=ON  PLU=ON  CHANNEL? OR CONDUIT? OR DU
                CT? OR PASSAGE? OR TROUGH? OR TUNNEL?
L54          38 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L47 AND (L52
                OR L53)
L55         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L47 OR L49 OR
                L51 OR L54
L56             QUE  SPE=ON  ABB=ON  PLU=ON  DISPOS? OR ATTACH? OR ADHE
                R? OR ADSOR? OR ABSOR? OR PART? OR ADJ? OR SINGL?
L57          66 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L55 AND L56
L58             QUE  SPE=ON  ABB=ON  PLU=ON  CONNECT? OR INTERCONNECT?
                OR INTER?(A)CONNECT?
L59         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L55 OR L57
L60          49 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L59 AND L58
L61         112 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L60 OR L39
L63         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L59 OR L60 OR
                L61
L64          10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L63 AND ((L2
                OR L3 OR L4 OR L5 OR L6 OR L7))
L65             QUE  SPE=ON  ABB=ON  PLU=ON  FUELCELL? OR (FUEL?(2A)CEL
                L?) OR FC OR SOFC OR DFC OR PEMFC
L66         135 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L63 AND L65
L67          10 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L64 AND L66
L68         125 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L66 NOT L67
L69             QUE  SPE=ON  ABB=ON  PLU=ON  PY=<2005 NOT P/DT
L70             QUE  SPE=ON  ABB=ON  PLU=ON  (PY=<2005 OR PRY=<2005 OR
                AY=<2005 OR MY=<2005 OR REVIEW/DT) AND P/DT
L71          79 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L68 AND (L69
                OR L70)
L72          30 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L71 AND L58
L73          55 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L71 AND L33
L75          18 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L72 AND L73
L76          55 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L73 AND (L23
                OR L25 OR L26 OR L48 OR L50)
L80          55 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L76 AND L12
L81          51 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L80 AND L23
L82          51 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L80 AND (SAME
                OR OPPOS?)
L83          51 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L81 OR L82
L84          52 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L83 OR L75
L85          18 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L84 AND (L72
                OR L75)
L86          30 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L85 OR L72 OR
                L75
L87          30 SEA FILE=HCAPLUS SPE=ON  ABB=ON  PLU=ON  L86 AND L10
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TEXT SEARCH

=> d l87 1-30 ibib ed abs hitind

L87 ANSWER 1 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2008:490294 HCAPLUS Full-text
DOCUMENT NUMBER: 148:475888
TITLE: Solid polymer MEMS-based fuel cells
INVENTOR(S): Jankowski, Alan F.; Morse, Jeffrey D.
PATENT ASSIGNEE(S): The Regents of the University of California, USA
SOURCE: U.S., 15pp., Cont.-in-part of U.S. Ser. No.241,159.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 3
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 7361424	B2	20080422	US 2003-637915	2003 0808 <--
US 20040048128	A1	20040311		
US 20030138685	A1	20030724	US 1999-241159	1999 0201 <--
US 6638654	B2	20031028		
US 20040043273	A1	20040304	US 2003-637914	2003 0808 <--
US 7189471	B2	20070313		
PRIORITY APPLN. INFO.:			US 1999-241159 A2	1999 0201 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
ED Entered STN: 23 Apr 2008
AB Disclosed is a micro-electro-mech. systems (MEMS) based thin-film fuel cells for elec. power applications. The MEMS-based fuel cell may be of a solid oxide type, a solid polymer type, or a proton exchange membrane type, and each fuel cell basically consists of an anode and a cathode separated by an electrolyte layer. The electrolyte layer can consist of either a solid oxide or solid polymer material, or proton exchange membrane electrolyte materials may be used. Addnl. catalyst layers can also sep. the electrodes (cathode and anode) from the electrolyte. Gas manifolds are utilized to transport the fuel and oxidant to each cell and provide a path for exhaust gases. The elec. current generated from each cell is drawn away with an interconnect and support structure integrated with the gas manifold. The fuel cells utilize integrated resistive heaters for efficient heating of the materials. By combining MEMS technol. with thin-film deposition technol., thin-film fuel cells having microflow channels and full-integrated circuitry can be produced that will lower the operating temperature and will yield an order of magnitude greater power d. than the currently known fuel cells.
INCL 429019000; 429030000; 429032000; 429038000; 429039000; 427115000
IPCI H01M0008-06 [I,A]; H01M0008-04 [I,A]
IPCR H01M0008-06 [I,C]; H01M0008-06 [I,A]; H01M0008-04 [I,C]; H01M0008-04 [I,A]; H01M0008-10 [I,C*]; H01M0008-10 [I,A]; H01M0008-12 [I,C*]; H01M0008-12 [I,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]
NCL 429/425.000; 427/115.000; 429/465.000; 429/513.000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

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     Section cross-reference(s): 38, 76
ST   solid polymer MEMS based fuel cell
IT   Sol-gel processing
        (coating; solid polymer MEMS-based fuel
        cells)
IT   Catalysts
        (electrocatalysts; solid polymer MEMS-based
        fuel cells)
IT   Coating materials
        (insulation; solid polymer MEMS-based
        fuel cells)
IT   Control apparatus
        (microcontroller; solid polymer MEMS-based
        fuel cells)
IT   Pumps
        (micropumps; solid polymer MEMS-based fuel
        cells)
IT   Valves
        (microvalves; solid polymer MEMS-based fuel
        cells)
IT   Sulfonic acids
     RL: TEM (Technical or engineered material use); USES (Uses)
        (perfluorosulfonic acid polymers; solid polymer MEMS-
        based fuel cells)
IT   Vapor deposition process
        (phys.; solid polymer MEMS-based fuel
        cells)
IT   Fuel cells
        (proton exchange membrane; solid polymer MEMS-based
        fuel cells)
IT   Micromachines
        (pumps; solid polymer MEMS-based fuel
        cells)
IT   Fuel gas manufacturing
        (reforming; solid polymer MEMS-based fuel
        cells)
IT   Heaters
        (resistive; solid polymer MEMS-based fuel
        cells)
IT   Coating process
        (sol-gel; solid polymer MEMS-based fuel
        cells)
IT   Fuel cells
        (solid oxide; solid polymer MEMS-
        based fuel cells)
IT   Chemical vapor deposition
     Microelectromechanical systems
        (solid polymer MEMS-based fuel
        cells)
IT   Hydrocarbons
     RL: RCT (Reactant); TEM (Technical or engineered material use);
     RACT (Reactant or reagent); USES (Uses)
        (solid polymer MEMS-based fuel
        cells)
IT   Coating process
        (spin-cast; solid polymer MEMS-based fuel
        cells)
IT   Fluoropolymers
     RL: TEM (Technical or engineered material use); USES (Uses)
        (sulfo-containing, perfluoro; solid polymer MEMS-based
        fuel cells)
IT   1333-74-0P, Hydrogen, uses
     RL: SPN (Synthetic preparation); TEM (Technical or engineered
     material use); PREP (Preparation); USES (Uses)
        (solid polymer MEMS-based fuel
        cells)
IT   1344-28-1, Alumina, uses   7440-21-3, Silicon, uses
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RL: TEM (Technical or engineered material use); USES (Uses)
(solid polymer MEMS-based fuel cells)

OS.CITING REF COUNT: 22 THERE ARE 22 CAPLUS RECORDS THAT CITE THIS RECORD (34 CITINGS)
REFERENCE COUNT: 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 2 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:702516 HCAPLUS Full-text
DOCUMENT NUMBER: 147:98708
TITLE: Construction of a solid oxide fuel cell stack with gas distribution structures
INVENTOR(S): Kuhn, Bernd
PATENT ASSIGNEE(S): Bayerische Motoren Werke A.-G., Germany
SOURCE: Ger. Offen., 10pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
DE 102005061585	A1	20070628	DE 2005-102005061585 <--	20051222
US 20070148516	A1	20070628	US 2006-640996 <--	20061219
PRIORITY APPLN. INFO.:			DE 2005-102005061585A <--	20051222

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
ED Entered STN: 29 Jun 2007
AB The invention concerns a solid fuel cell stack, which is provided with single cells, which are optionally arranged with contact layers between a top shell and a gastight-connected lower shell in the boundary region. Furthermore gas distributor structures are provided in each case between the top panel of a 1st single cell and the lower shell of this neighboring single cell, so that breakthroughs are located over these gas distributor structures and in the top panel as well as the lower shell in the range within the edges. In such a manner a gas passage to the turned side of the single cell is possible, whereby each single cell consists of a substrate with on that applied anode layer, solid electrolyte layer and cathode layer and whereby a tension compensation layer provided with breaking through is applied in the operating temperature range of the fuel cell on the electrode layers and the electrolyte layer opposite side of the substrate. Preferably the top shell and the lower shell are similar and twisted arranged in the stack. IPCI H01M0008-02 [I,A]
IPCR H01M0008-02 [I,C]; H01M0008-02 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell stack construction gas distribution structure
IT Fuel cells
(solid oxide; construction with gas distribution structures)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 3 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:671057 HCAPLUS Full-text
DOCUMENT NUMBER: 147:75904

TITLE: Solid oxide fuel cell having multiple unit cells separated via thermoconductive dielectric partitions for uniform temperature distribution
INVENTOR(S): Murota, Tomoya; Tokoi, Hiromi; Takahashi, Kokoro; Gunji, Akira
PATENT ASSIGNEE(S): Hitachi Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007157424	A	20070621	JP 2005-349078 <--	2005 1202
PRIORITY APPLN. INFO.:			JP 2005-349078 <--	2005 1202

ED Entered STN: 21 Jun 2007
AB The title cell comprises a plurality of unit cells, wherein the adjacent cells are separated from each other by an elec. insulating partition. The partition is composed of an elec. insulating member (M1) and a thermoconductive member (M2) having a higher thermal conductivity than the M1. In another embodiment, the title cell comprises a plurality of cell assemblies held in a gas-tight container, each assembly having a solid oxide electrolyte held between an anode and cathode. These assemblies are connected to each other via a partition of the above structure coated with a current collector plate on each side. The above cell may have an assembly-supporting member (M3) disposed between at least one of the unit cells and the partitions, wherein the partitions comprise thermoconductive members sandwiched by metal felts and elec. insulating members sandwiching the felts for portions contacting to M3 and the thermoconductive members for the other portions. Fuel cells with no temperature variation in the longitudinal direction are provided with this invention. IPCI H01M0008-24 [I,A]; H01M0008-12 [I,A]
IPCR H01M0008-24 [I,C]; H01M0008-24 [I,A]; H01M0008-12 [I,C]; H01M0008-12 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell unit thermal conductor partition; uniform temp distribution fuel cell dielec thermoconductive partition
IT Metals
RL: TEM (Technical or engineered material use); USES (Uses)
(felts, partition containing; solid oxide fuel cells having multiple unit cells separated via thermoconductive dielec. partitions for uniform temperature distribution)
IT Felts
(metals, partition containing; solid oxide fuel cells having multiple unit cells separated via thermoconductive dielec. partitions for uniform temperature distribution)
IT Electric insulators
Thermal conductors
(solid oxide fuel cells having multiple unit cells separated via thermoconductive dielec. partitions for uniform temperature distribution)
IT Fuel cells

(solid oxide; solid oxide fuel cells having multiple unit cells separated via thermoconductive dielec. partitions for uniform temperature distribution)

L87 ANSWER 4 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2007:88288 HCAPLUS Full-text
DOCUMENT NUMBER: 146:146037
TITLE: Honeycomb solid oxide fuel cell
INVENTOR(S): Kashiwabara, Takenori
PATENT ASSIGNEE(S): Kikusui Chemical Industries Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2007018865	A	20070125	JP 2005-198888 <--	20050707
PRIORITY APPLN. INFO.:			JP 2005-198888 <--	20050707

ED Entered STN: 26 Jan 2007
AB The fuel cell is equipped with honeycomb solid electrolyte structure showing air tightness to give a plurality of first gas passages, a plurality of second gas passages, an electrode facing to the first gas passages, and an electrode facing to the second gas passages. The fuel cell has a plurality of electrochem. unit cells arranged on the same flat surface, where the cell unit consists of a first gas passage, a second gas passage, a first electrode, a second electrode, a first electrode terminal connected to end of the first electrode, and a second electrode terminal opposing to the first electrode terminal. Neighboring 2 unit cells are series connected at the first electrode terminal or the second electrode terminal. The fuel cell provides high power output per unit area.
IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]
IPCR H01M0008-02 [I,C]; H01M0008-02 [I,A]; H01M0008-12 [I,C]; H01M0008-12 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST honeycomb solid oxide fuel cell
IT Fuel cells
(solid oxide; honeycomb solid oxide fuel cell)

L87 ANSWER 5 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:1311136 HCAPLUS Full-text
DOCUMENT NUMBER: 146:47863
TITLE: Flat-shape solid oxide fuel cell equipped with two mechanisms for separately compressing unit cells and manifolds
INVENTOR(S): Sugita, Satoshi; Arai, Hajime; Arakawa, Masahiro
PATENT ASSIGNEE(S): Nippon Telegraph and Telephone Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 13pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006339035	A	20061214	JP 2005-162490	2005 0602
JP 4291299	B2	20090708	<--	
PRIORITY APPLN. INFO.:			JP 2005-162490	2005 0602
			<--	

ED Entered STN: 15 Dec 2006

AB The title cell comprises alternately stacked flat-shape unit fuel cells and interconnectors, each unit cell comprising a flat electrolyte membrane sandwiched in between a cathode and anode, and manifolds for supplying or discharging a fuel or oxidant gas. It is equipped with a 1st means, for compression of the cell stack, and a 2nd means, for compression of the manifolds. Preferably, the manifolds are made of alternate laminates of metal members and an elec. insulating manifold connectors, under optional insertion of glass having m.p. lower than the cell stack heat-resisting temperature, etc. The first mechanism improves adhesion between the unit cells and reduces power transmission loss at the connections, and the second mechanism improves gas sealing capability of the manifolds to prevent gas leakage.

IPCI H01M0008-24 [I,A]; H01M0008-02 [I,A]; H01M0008-12 [I,A];
H01M0008-24 [I,A]; H01M0008-02 [I,A]; H01M0008-12 [I,A]

IPCR H01M0008-24 [I,C]; H01M0008-24 [I,A]; H01M0008-02 [I,C];
H01M0008-02 [I,A]; H01M0008-12 [I,C]; H01M0008-12 [I,A]

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST SOFC manifold cell stack sep compression mechanism; manifold sealing flat solid oxide fuel cell

IT Compression
(flat SOFC with sep. compression mechanisms for secure sealing of manifolds and connection of unit cells)

IT Ceramics
(manifold connector; flat SOFC with sep. compression mechanisms for secure sealing of manifolds and connection of unit cells)

IT Mica-group minerals
RL: TEM (Technical or engineered material use); USES (Uses)
(manifold connector; flat SOFC with sep. compression mechanisms for secure sealing of manifolds and connection of unit cells)

IT Solders
(sealing of manifolds with their connectors with; flat SOFC with sep. compression mechanisms for secure sealing of manifolds and connection of unit cells)

IT Glass
RL: TEM (Technical or engineered material use); USES (Uses)
(sealing of manifolds with their connectors with; flat SOFC with sep. compression mechanisms for secure sealing of manifolds and connection of unit cells)

IT Fuel cells
(solid oxide; flat SOFC with sep. compression mechanisms for secure sealing of manifolds and connection of unit cells)

IT 12033-89-5, Silicon nitride, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(compression spring; flat SOFC with sep. compression mechanisms for secure sealing of manifolds and connection of unit cells)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L87 ANSWER 6 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2006:49538 HCAPLUS Full-text
DOCUMENT NUMBER: 144:111338
TITLE: Solid oxide fuel cells with high current collection, units therefor, and cell stacks therefrom
INVENTOR(S): Yamashita, Shoji; Nishihara, Masato; Matsuzaki, Yoshio; Fujita, Kenjiro
PATENT ASSIGNEE(S): Kyocera Corp., Japan; Tokyo Gas Co., Ltd.
SOURCE: Jpn. Kokai Tokkyo Koho, 14 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006019059	A	20060119	JP 2004-193134	2004 0630 <--

PRIORITY APPLN. INFO.: JP 2004-193134 2004 0630 <--

ED Entered STN: 19 Jan 2006
AB In the units, plural elec. generation units (A) consisting of laminates of anodes, solid electrolytes, and cathodes are arranged on surfaces of fuel gas path-equipped columnar insulator supports and tandemly interconnected via interconnectors, which in nearest to (farthest from) fuel gas manifolds have thickness larger than that of other ones. Also claimed are cell stacks, wherein plural number of the units are elec. interconnected, and fuel cells containing the stacks in cases. IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]; H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell
current collection efficiency; tandem interconnection
thickness solid oxide fuel
cell
IT Interconnections, electric
(elec. interconnector-equipped tandem units
for solid oxide fuel
cells with high current collection)
IT Fuel cells
(solid oxide; elec. interconnector
-equipped tandem units for solid
oxide fuel cells with high current
collection)

L87 ANSWER 7 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:1152738 HCAPLUS Full-text
DOCUMENT NUMBER: 143:408213
TITLE: Solid oxide fuel cell stack with a bipolar conductor structure instead of bipolar plates
INVENTOR(S): Leithner, Reinhard
PATENT ASSIGNEE(S): Technische Universitaet Braunschweig, Germany
SOURCE: Ger. Offen., 12 pp.
CODEN: GWXXBX
DOCUMENT TYPE: Patent
LANGUAGE: German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE

DE 102004015660 A1 20051027 DE 2004-102004015660
2004
0331
<--
PRIORITY APPLN. INFO.: DE 2004-102004015660
2004
0331
<--
ED Entered STN: 28 Oct 2005
AB The invention concerns a solid oxide fuel cell (SOFC) stack, which is provided with a conductor structure instead of bipolar plates and whereby the elec.-insulated anode layer of a section on the top side of a solid electrolyte plate is elec.-conductive connected with an elec.-insulated cathode layer of the adjacent section on the lower surface of the same solid electrolyte plate. The stacked sections are switched elec. parallel according to the strength of current, and adjacent sections are switched in series, whereby a tension multiplication is obtained. A section is provided with at least a channel, generally several channels, which are passed by the fuel gas, air/O2 or cooling fluid or a reforming gas/steam mixture IPCI H01M0008-10 [ICM,7]; H01M0008-02 [ICS,7]
IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-10 [I,C*];
H01M0008-10 [I,A]; H01M0008-12 [N,C*]; H01M0008-12 [N,A];
H01M0008-24 [I,C*]; H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell
stack bipolar conductor structure
IT Crystal structure types
(C1 (fluorite); of solid oxide
electrolyte for fuel cell stack
with a bipolar conduction structure instead of bipolar
plates)
IT Vapor deposition process
(chemical; solid oxide fuel
cell stack with a bipolar conductor structure instead
of bipolar plates)
IT Perovskite-type crystals
(of solid oxide electrolyte for
fuel cell stack with a bipolar conduction
structure instead of bipolar plates)
IT Coating process
(plating; solid oxide fuel
cell stack with a bipolar conductor structure instead
of bipolar plates)
IT Sputtering
(solid oxide fuel cell
stack with a bipolar conductor structure instead of bipolar
plates)
IT Fuel cells
(solid oxide; stack with a bipolar
conductor structure)
IT 1313-99-1, Nickel oxide, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical
process); TEM (Technical or engineered material use); PROC
(Process); USES (Uses)
(anode layer for solid oxide
fuel cell stack with a bipolar conductor
structure)
IT 7440-24-6, Strontium, uses
RL: MOA (Modifier or additive use); USES (Uses)
(in cathode layer for solid oxide
fuel cell stack with a bipolar conductor
structure)
IT 7440-65-5, Yttrium, uses
RL: MOA (Modifier or additive use); USES (Uses)
(solid oxide electrolyte
plate for fuel cell stack with a
bipolar conductor structure)
IT 58438-69-0

RL: MOA (Modifier or additive use); USES (Uses)
(strontium-doped; cathode layer for solid oxide fuel cell stack with a bipolar conductor structure)

IT 1314-23-4, Zirconia, uses
RL: PEP (Physical, engineering or chemical process); PYP (Physical process); TEM (Technical or engineered material use); PROC (Process); USES (Uses)
(yttrium-doped; solid oxide electrolyte plate for fuel cell stack with a bipolar conductor structure)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 4 THERE ARE 4 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 8 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:155488 HCAPLUS Full-text
DOCUMENT NUMBER: 142:243604
TITLE: Solid electrolyte fuel-cell device
INVENTOR(S): Horiuchi, Michio; Watanabe, Misa; Suganuma, Shigeaki
PATENT ASSIGNEE(S): Shinko Electric Co. Ltd., Japan
SOURCE: Eur. Pat. Appl., 15 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1508932	A2	20050223	EP 2004-254973	2004 0818 <--
EP 1508932	A3	20051228		
EP 1508932	B1	20081126		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, PL, SK, HR				
JP 2005071628	A	20050317	JP 2003-208426	2003 0822 <--
JP 4405196	B2	20100127		
CA 2478005	A1	20050222	CA 2004-2478005	2004 0818 <--
US 20050042491	A1	20050224	US 2004-921313	2004 0819 <--
PRIORITY APPLN. INFO.:			JP 2003-208426 A	2003 0822 <--

ED Entered STN: 24 Feb 2005
AB The present invention relates to a solid electrolyte fuel-cell device wherein a plurality of fuel cells are formed on a single plate. A plurality of cathode layers are formed on one surface of the flat plate -like solid electrolyte substrate, and a plurality of anode layers on the opposite surface thereof, and each fuel cell is formed from a cathode layer and anode layer. An electromotive force extracting lead wire is

attached to the cathode layer, and a lead wire is attached to the anode layer. The plurality of fuel cells are
connected in series by elec. connecting the cathode layer of one fuel cell to the anode layer of an adjacent fuel cell. Flames formed by combustion of a fuel such as a methane gas are supplied to the entire surface of each anode layer, and air is supplied to each cathode layer.
IPCI H01M0008-12 [I,C]; H01M0008-12 [I,A]
IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-12 [I,C];
H01M0008-12 [I,A]; H01M0008-10 [I,C*]; H01M0008-10 [I,A];
H01M0008-24 [I,C*]; H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST fuel cell device solid electrolyte
IT Fuel cell electrolytes
(solid electrolyte fuel-cell
device)
IT Fuel cells
(solid electrolyte; solid electrolyte
fuel-cell device)
IT 12035-36-8, Nickel oxide (NiO2)
RL: DEV (Device component use); USES (Uses)
(Li-doped; solid electrolyte fuel
-cell device)
IT 7439-93-2, Lithium, uses
RL: MOA (Modifier or additive use); USES (Uses)
(NiO2 doped with; solid electrolyte fuel-
cell device)
IT 59989-70-7, Cobalt samarium strontium oxide
cosm0.5sr0.5o3 116875-84-4, Cerium samarium oxide
(Ce0.8Sm0.2O1.9)
RL: DEV (Device component use); USES (Uses)
(solid electrolyte fuel-
cell device)
IT 12036-35-0, Rhodium oxide (Rh2O3)
RL: MOA (Modifier or additive use); USES (Uses)
(solid electrolyte fuel-
cell device)
IT 74-82-8, Methane, uses 106-97-8, Butane, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(solid electrolyte fuel-cell
device)
OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)
REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 9 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2005:57688 HCAPLUS Full-text
DOCUMENT NUMBER: 142:159521
TITLE: Stacked structure for solid-
oxide fuel cells
INVENTOR(S): Sugita, Satoshi; Orui, Himeko; Watabe,
Masataka; Arakawa, Masahiro
PATENT ASSIGNEE(S): Nippon Telegraph and Telephone Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2005019268	A	20050120	JP 2003-183948	2003 0627

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PRIORITY APPLN. INFO.: JP 2003-183948
2003
0627
<--
ED Entered STN: 21 Jan 2005
AB The title fuel cells comprise (1) a pl. number of planar fuel cell units comprising an electrolyte, a fuel electrode, and an air electrode and (2) an interconnector elec.-connecting between cell units, (3) gas flowing channels feeding the fuel and the air into each cell, and (4) elec.-insulative cell holders which have a thermal expansion coefficient similar to that of the cells, sep. fed fuel and oxidant gas, and provide leveled surface to make holder- interconnector interface thermal-stress-caused sliding between adjacent cells. The arrangement makes possible stable formation of the stacks.
IPCI H01M0008-24 [ICM,7]; H01M0008-02 [ICS,7]; H01M0008-12 [ICS,7]
IPCR H01M0008-02 [I,A]; H01M0008-02 [I,C*]; H01M0008-12 [I,A];
H01M0008-12 [I,C*]; H01M0008-24 [I,A]; H01M0008-24 [I,C*]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid oxide fuel cell
stack holder interconnector sliding interface
IT Ceramics
(cell holders; stacked structure for solid-oxide fuel cells)
IT Holders
(cell; stacked structure for solid-oxide fuel cells)
IT Electrodes
(fuel/oxidant; stacked structure for solid-oxide fuel cells)
IT Fuel cells
(solid oxide stacked; stacked structure for solid-oxide fuel cells)
IT Electrolytes
Thermal expansion
(stacked structure for solid-oxide fuel cells)
IT Stress, mechanical
(thermal; stacked structure for solid-oxide fuel cells)
IT 1314-23-4, Zirconia, uses 1344-28-1, Alumina, uses 12060-08-1, Scandium oxide (Sc2O3)
RL: MOA (Modifier or additive use); PRP (Properties); USES (Uses)
(electrolyte composition; stacked structure for solid-oxide fuel cells)

L87 ANSWER 10 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:741988 HCAPLUS Full-text
DOCUMENT NUMBER: 141:246108
TITLE: Unit cell for fuel cell and the fuel cell
INVENTOR(S): Marutani, Kazumasa; Hamada, Noriaki
PATENT ASSIGNEE(S): Kyocera Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 12 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004253279	A	20040909	JP 2003-43169	2003 0220
			<--	
JP 4028809	B2	20071226		

PRIORITY APPLN. INFO.: JP 2003-43169
2003
0220
<--

ED Entered STN: 10 Sep 2004

AB The unit cell has an inner electrode, a solid electrolyte, and an outer electrode on a 1st side of a conductive support plate an interconnector on the opposite side of the plate, with the electrolyte layer extends from the 1st side to cover the edge of the opposite side; where the sum of the thickness of the edge of the support plate, the inner electrode, and the electrolyte is greater than the sum of the thickness of the support plate, the inner electrode, and the electrolyte layer. The fuel cell has several unit cells in a container.

IPCI H01M0008-02 [I,A]; H01M0008-12 [I,A]

IPCR H01M0008-02 [I,A]; H01M0008-02 [I,C*]; H01M0008-12 [I,A]; H01M0008-12 [I,C*]

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST planar solid electrolyte fuel cell structure

IT Fuel cells
(solid oxide; structure of planar unit cells for solid oxide fuel cells)

L87 ANSWER 11 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2004:720388 HCAPLUS Full-text

DOCUMENT NUMBER: 141:246061

TITLE: Solid oxide fuel cell

INVENTOR(S): Funabashi, Yoshihiro; Ishikawa, Hiroya; Hattori, Masaaki

PATENT ASSIGNEE(S): NGK Spark Plug Co., Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 15 pp.
CODEN: JKXXAF

DOCUMENT TYPE: Patent

LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004247174	A	20040902	JP 2003-35718	2003 0213
			<--	

PRIORITY APPLN. INFO.: JP 2003-35718
2003
0213
<--

ED Entered STN: 03 Sep 2004

AB The fuel cell has unit cells stacked alternately with metal separators, where each unit cell has a cathode and an anode on opposite sides of an electrolyte and a collector installed between its cathode and a separator, and the collector is connected to the separator by a solder. The solder is preferably a Ag based solder.

IPCI H01M0008-02 [ICM,7]; H01M0008-12 [ICS,7]

IPCR H01M0008-02 [I,A]; H01M0008-02 [I,C*]; H01M0008-12 [I,A]; H01M0008-12 [I,C*]

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST solid oxide fuel cell cathode metal separator silver solder

IT Fuel cells
(solid oxide; solid oxide fuel cells containing cathodes connected to metal separators by silver solders)

IT 7440-06-4, Platinum, uses 11109-52-7, Sus 430 12606-04-1, Inconel 610 59707-46-9, Lanthanum strontium manganate 110620-52-5, Cobalt lanthanum strontium oxide

(CoLa0.6Sr0.4O3) 148595-66-8, Cobalt iron lanthanum strontium oxide (Co0.2Fe0.8La0.6Sr0.4O3)
RL: DEV (Device component use); USES (Uses)
(solid oxide fuel cells containing cathodes connected to metal separators by silver solders)

IT 126102-72-5
RL: NUU (Other use, unclassified); USES (Uses)
(solid oxide fuel cells containing cathodes connected to metal separators by silver solders)

L87 ANSWER 12 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:352021 HCAPLUS Full-text
DOCUMENT NUMBER: 140:360302
TITLE: Solid polymer-electrolyte fuel cell stacks designed capable of easily discharging water
INVENTOR(S): Sato, Shuji; Yoshida, Hiromichi
PATENT ASSIGNEE(S): Honda Motor Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 9 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004134130	A	20040430	JP 2002-295198	2002 1008
			<--	
JP 3673252	B2	20050720		

PRIORITY APPLN. INFO.: JP 2002-295198 2002 1008
<--

ED Entered STN: 30 Apr 2004
AB The stack, comprising horizontally and alternately laminated electrode-electrolyte layers and separators, is equipped with an oxidizer-gas- discharging manifold as an outlet, and a downward-sloped discharge pipe connected with the manifold, wherein a bypass pipe is so formed as to connect the manifold and the discharge pipe in such a way that the position of opening is higher at the manifold side. The fuel cell stacks show durable power generating efficiency.
IPCI H01M0008-24 [ICM,7]; H01M0008-10 [ICS,7]
IPCR H01M0008-10 [I,A]; H01M0008-10 [I,C*]; H01M0008-24 [I,A]; H01M0008-24 [I,C*]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid polymer electrolyte fuel cell water discharge
IT Fuel cells
(solid electrolyte, polymer electrolyte; solid polymer-electrolyte fuel cell stacks designed capable of easily discharging water)
IT Waters
(solid polymer-electrolyte fuel cell stacks designed capable of easily discharging water)
IT 7782-44-7, Oxygen, miscellaneous
RL: MSC (Miscellaneous)
(oxidizer, discharge of; solid polymer-electrolyte fuel cell stacks designed capable of easily discharging water)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L87 ANSWER 13 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2004:219408 HCAPLUS Full-text
DOCUMENT NUMBER: 140:256295
TITLE: Solid oxide fuel cell
INVENTOR(S): Hiwata, Kenichi
PATENT ASSIGNEE(S): Toto Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 21 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004087490	A	20040318	JP 2003-288038 <--	2003 0806
JP 4524791	B2	20100818		

PRIORITY APPLN. INFO.: JP 2002-228344 A 2002 0806 <--

ED Entered STN: 19 Mar 2004
AB The fuel cell has an electrolyte membrane, a cathode and an anode on opposite sides of the electrolyte membrane, and interconnectors; where the electrolyte membrane has at least a Sc and Y solid solution containing ZrO2 layer, and particles on the membrane surface has diams. ≥3 and ≥50 μm at 3 and 97% at its size distribution pattern. IPCI H01M0008-02 [I,A]; C04B0035-48 [I,A]; H01M0008-12 [I,A]
IPCR C04B0035-48 [I,A]; C04B0035-48 [I,C*]; H01M0004-86 [I,A]; H01M0004-86 [I,C*]; H01M0008-02 [I,A]; H01M0008-02 [I,C*]; H01M0008-12 [I,A]; H01M0008-12 [I,C*]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST scandium yttrium zirconium oxide fuel cell electrolyte particle size
IT Fuel cell electrolytes
(scandium oxide and yttria stabilized zirconia electrolytes with controlled particle size distribution for solid oxide fuel cells)
IT 122219-13-0, Scandium yttrium zirconium oxide (Sc0.08Y0.08Zr0.92O2.08) 656820-29-0, Scandium yttrium zirconium oxide (Sc0.04Y0.16Zr0.9O2.1) 671180-90-8, Scandium yttrium zirconium oxide (Sc0.1Y0.1Zr0.9O2.1) 671180-91-9, Scandium yttrium zirconium oxide (Sc0.03Y0.03Zr0.97O2.03) 671180-92-0, Scandium yttrium zirconium oxide (Sc0.06Y0.06Zr0.94O2.06) 671180-93-1, Scandium yttrium zirconium oxide (Sc0.12Y0.12Zr0.88O2.12) 671180-94-2, Scandium yttrium zirconium oxide (Sc0.02Y0.02Zr0.98O2.02) 671180-95-3, Scandium yttrium zirconium oxide (Sc0.15Y0.15Zr0.85O2.15) 671180-96-4, Scandium yttrium zirconium oxide (Sc0.14Y0.06Zr0.9O2.1) 671180-97-5, Scandium yttrium zirconium oxide (Sc0.18Y0.02Zr0.9O2.1) 671180-98-6, Scandium yttrium zirconium oxide (Sc0.03Y0.17Zr0.9O2.1) 671180-99-7, Scandium yttrium zirconium oxide (Sc0.19Y0.01Zr0.9O2.1) 671181-00-3, Cerium scandium yttrium zirconium oxide (Ce0.01Sc0.1Y0.1Zr0.89O2.1) 671181-01-4, Cerium scandium yttrium zirconium oxide (Ce0.05Sc0.1Y0.1Zr0.85O2.1) 671181-02-5, Cerium scandium yttrium zirconium oxide (Ce0.06Sc0.1Y0.1Zr0.84O2.1) 671181-03-6, Bismuth scandium yttrium zirconium oxide (Bi0.02Sc0.1Y0.1Zr0.89O2.11) 671181-04-7, Bismuth scandium yttrium zirconium oxide (Bi0.1Sc0.1Y0.1Zr0.85O2.15) 671181-05-8, Bismuth scandium

yttrium zirconium oxide (Bi0.06Sc0.1Y0.1Zr0.84O2.16)
671181-06-9, Bismuth scandium yttrium zirconium oxide
(Bi0.01Sc0.1Y0.1Zr0.89O2.1) 671181-07-0
RL: DEV (Device component use); PRP (Properties); USES (Uses)
(scandium oxide and yttria stabilized zirconia electrolytes with controlled particle size distribution for solid oxide fuel cells)

L87 ANSWER 14 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:912674 HCAPLUS Full-text
DOCUMENT NUMBER: 139:367592
TITLE: Solid oxide fuel cell with a metal foam seal
INVENTOR(S): Keegan, Kevin R.
PATENT ASSIGNEE(S): USA
SOURCE: U.S. Pat. Appl. Publ., 10 pp.
CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20030215689	A1	20031120	US 2002-147406	20020516 <--
WO 2003098729	A1	20031127	WO 2003-US14310	20030507 <--

RW: AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR
PRIORITY APPLN. INFO.: US 2002-147406 A 20020516 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
ED Entered STN: 21 Nov 2003
AB Disclosed herein are a solid oxide fuel cell and a method for making the same. In one embodiment, the solid oxide fuel cell comprises: a solid oxide fuel cell, comprising: an electrolyte disposed between and in ionic communication with a first electrode and a second electrode, forming an electrochem. cell; a flow plate disposed adjacent to and in elec. communication with at least a portion of the electrochem. cell; and a seal member sealably engaging the flow plate, wherein the seal member comprises a foam selected from the group consisting of a metal, a metal alloy, and combinations comprising at least one of the foregoing foams. In one embodiment, the method of manufacturing the solid oxide fuel cell, comprises: disposing a first electrode and a second electrode on opposite sides of a solid electrolyte; disposing a flow plate adjacent to and in elec. communication with at least a portion of the electrochem. cell; and disposing the seal member in sealable engagement with the flow plate.
INCL 429035000; 429030000; 029623200
IPCI H01M0008-02 [ICM,7]; H01M0002-08 [ICS,7]
IPCR H01M0002-00 [I,C*]; H01M0002-00 [I,A]; H01M0002-02 [I,C*]; H01M0002-02 [I,A]; H01M0002-08 [I,C*]; H01M0002-08 [I,A]; H01M0002-14 [I,C*]; H01M0002-14 [I,A]; H01M0008-00 [I,C*]; H01M0008-00 [I,A]; H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-10 [I,C*]; H01M0008-10 [I,A]; H01M0008-12 [N,C*]; H01M0008-12 [N,A]
NCL 429/495.000; 029/623.200; 429/509.000; 429/514.000; 429/535.000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 56

ST seal metal foam solid oxide fuel cell

IT Group VIII elements
RL: TEM (Technical or engineered material use); USES (Uses)
(Group 8; solid oxide fuel cell with metal foam seal)

IT Interconnections, electric
(flow plate; solid oxide fuel cell with metal foam seal)

IT Foams
(metal; solid oxide fuel cell with metal foam seal)

IT Cermets
Composites
Gaskets
Seals (parts)
(solid oxide fuel cell with metal foam seal)

IT Alloys, uses
Hydrides
Oxides (inorganic), uses
Salts, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(solid oxide fuel cell with metal foam seal)

IT Fuel cells
(solid oxide; solid oxide fuel cell with metal foam seal)

IT 7429-90-5, Aluminum, uses 7439-91-0, Lanthanum, uses 7440-02-0, Nickel, uses 7440-05-3, Palladium, uses 7440-06-4, Platinum, uses 7440-22-4, Silver, uses 7440-24-6, Strontium, uses 7440-32-6, Titanium, uses 7440-47-3, Chromium, uses 7440-50-8, Copper, uses 7440-57-5, Gold, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(solid oxide fuel cell with metal foam seal)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L87 ANSWER 15 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2003:677266 HCAPLUS Full-text
DOCUMENT NUMBER: 140:62194
TITLE: Patterned series-connected SOFC
AUTHOR(S): Lai, Tammy; Liu, Jiang; Barnett, Scott A.
CORPORATE SOURCE: Materials Science and Engineering Department, Northwestern University, Evanston, IL, 60208, USA
SOURCE: Proceedings - Electrochemical Society (2003), 2003-7(Solid Oxide Fuel Cells VIII (SOFC VIII)), 1068-1076
CODEN: PESODO; ISSN: 0161-6374
PUBLISHER: Electrochemical Society
DOCUMENT TYPE: Journal
LANGUAGE: English
ED Entered STN: 29 Aug 2003
AB Integrated solid oxide fuel cells (ISOFC) are small, thin-electrolyte cells connected in series on a porous insulating support. Statistically designed expts. have shown that supports made from partially stabilized zirconia using 15 wt% filler have a good combination of porosity and flexural strength. Conductivity measurements of thin-layer Ni-YSZ anode material show excellent conductivity Similar tests on La0.6Sr0.4Fe0.8Co0.2O3 (LSCF)-based cathode materials show that applying layers of pure LSCF over the base of LSCF-Ce0.9Gd0.1O2 greatly improves conductivity An initial 4-cell ISOFC stack was shown to have a power d. of ≈ 60 mW/cm2 at 700°C, which can be improved in the future by using a

more conductive cathode. A simple elec. model is used to explain the exptl. observed stack performance.
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 72, 76
ST patterned series connected SOFC stack
IT Electric current-potential relationship
Open circuit potential
(patterned series-connected SOFC stacks)
IT Fuel cells
(solid oxide; patterned series-connected SOFC stacks)
IT 1313-99-1, Nickel oxide (NiO), uses 7440-22-4, Silver, uses 108916-22-9, Lanthanum manganese strontium oxide (La0.8MnSr0.2O3) 148595-66-8, Cobalt iron lanthanum strontium oxide (Co0.2Fe0.8La0.6Sr0.4O3) 183546-68-1, Cerium gadolinium oxide (Ce0.9Gd0.1O2) 403694-09-7, 8YSZ 639506-73-3
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)
(patterned series-connected SOFC stacks)
IT 64-17-5, Ethanol, uses
RL: NUU (Other use, unclassified); USES (Uses)
(patterned series-connected SOFC stacks)
REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 16 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:867304 HCAPLUS Full-text
DOCUMENT NUMBER: 137:372548
TITLE: Small-sized solid electrolyte fuel cells and their manufacture
INVENTOR(S): Shibata, Itaru; Hara, Naoki; Hatano, Shoji; Yamanaka, Mitsugu; Uchiyama, Makoto
PATENT ASSIGNEE(S): Nissan Motor Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 11 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2002329508	A	20021115	JP 2001-134695	2001 0501
			<--	
PRIORITY APPLN. INFO.:			JP 2001-134695	2001 0501
			<--	

ED Entered STN: 15 Nov 2002
AB The fuel cell unit comprises a laminate of an air electrode, solid electrolyte, and a fuel electrode which its side is covered with an elec. insulating and gas-impermeable material and which is sandwiched in between a pair of porous metal collectors which permeates fuel gas and oxidized gas. Fuel cells (A) comprising the said unit having an elec. conductive gas-impermeable layer laminated on either one of the collectors, (B) comprising the said unit stacked in a manner that the air or the fuel electrodes of the neighboring unit cell is connected via a porous metal collector, or (C) comprising multiple nos. of cylinder-shaped electrode/ electrolyte laminate inserted in holes formed in a porous metal collector matrix, with the cylinder inside equipped with the opposing collector, are also claimed. The fuel cells have small internal resistance. IPCI H01M0008-02 [ICM,7]; H01M0008-02 [ICS,7]; H01M0004-86 [ICS,7];
H01M0004-88 [ICS,7]; H01M0008-12 [ICS,7]; H01M0008-24 [ICS,7]
IPCR H01M0004-86 [I,C*]; H01M0004-86 [I,A]; H01M0004-88 [I,C*];

H01M0004-88 [I,A]; H01M0008-02 [I,C*]; H01M0008-02 [I,A];
H01M0008-12 [I,C*]; H01M0008-12 [I,A]; H01M0008-24 [I,C*];
H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid electrolyte fuel cell small
size manuf
IT Ceramics
(gas-impermeable insulator; manufacture of small-sized
solid electrolyte fuel cells with
low internal resistance)
IT Glass, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(gas-impermeable insulator; manufacture of small-sized
solid electrolyte fuel cells with
low internal resistance)
IT Electric insulators
(gas-permeable; manufacture of small-sized solid electrolyte
fuel cells with low internal resistance)
IT Porous materials
(metals, electrode collectors; manufacture of small-sized
solid electrolyte fuel cells with
low internal resistance)
IT Fuel cells
(solid electrolyte; manufacture of small-sized solid
electrolyte fuel cells with low
internal resistance)
IT 1314-36-9, Yttria, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(-stabilized zirconia, solid electrolyte; manufacture of
small-sized solid electrolyte fuel
cells with low internal resistance)
IT 7440-22-4, Silver, uses 11102-90-2, Copper, nickel base
12619-49-7 12667-63-9 39325-34-3 42611-06-3 68394-17-2
70409-48-2
RL: TEM (Technical or engineered material use); USES (Uses)
(electrode collector; manufacture of small-sized solid
electrolyte fuel cells with low
internal resistance)
IT 39377-48-5, Cobalt lanthanum strontium oxide
114168-16-0, Yttrium zirconium oxide (Y0.16Zr0.92O2.08)
RL: TEM (Technical or engineered material use); USES (Uses)
(electrode; manufacture of small-sized solid
electrolyte fuel cells with low
internal resistance)
IT 7440-02-0, Nickel, uses 12649-91-1 12756-52-4 55782-25-7
RL: TEM (Technical or engineered material use); USES (Uses)
(porous electrode collector; manufacture of small-sized
solid electrolyte fuel cells with
low internal resistance)
IT 1314-23-4, Zirconia, uses
RL: TEM (Technical or engineered material use); USES (Uses)
(yttria-stabilized, solid electrolyte; manufacture of
small-sized solid electrolyte fuel
cells with low internal resistance)
OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE
THIS RECORD (4 CITINGS)

L87 ANSWER 17 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2002:353785 HCAPLUS Full-text
DOCUMENT NUMBER: 136:343381
TITLE: Improved solid oxide
fuel cells
INVENTOR(S): Thomas, George J.; Meacham, G. B. Kirby
PATENT ASSIGNEE(S): Michael A. Cobb & Company, USA
SOURCE: PCT Int. Appl., 41 pp.
CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2002037589	A2	20020510	WO 2001-US48417	2001 1030
			<--	
WO 2002037589	A3	20030313		
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PH, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG, AP, EA, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, EP, OA				
CA 2427501	A1	20020510	CA 2001-2427501	2001 1030
			<--	
AU 2002030865	A	20020515	AU 2002-30865	2001 1030
			<--	
EP 1342279	A2	20030910	EP 2001-991117	2001 1030
			<--	
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR				
PRIORITY APPLN. INFO.:			US 2000-244332P P	2000 1030
			<--	
			WO 2001-US48417 W	2001 1030
			<--	

ED Entered STN: 12 May 2002
AB The present invention is a solid state electrochem. device incorporating planar sheets of cathode flow passages, in varying configurations and geometries, with thin coatings of electrolyte, anode and interconnect materials, which when assembled and bonded together form a monolithic honeycomb structure defining tubular passages for the air and gas to pass through. Air will flow through cathode flow passages inside the cell plates, while fuel will flow through passages formed between adjacent cells. Elec. insulating manifolds, designed to keep the fuel and air sep., are bonded at each end of the honeycomb monolith to feed air and fuel to the appropriate passages in the honeycomb. The fuel cell stack and manifolds are encased in a metal housing or cover to provide the outer walls of the manifold, complete the package, and define a discrete fuel cell module for use singly or in groups in fuel cell power generation systems. IPCI H01M0008-00 [ICM,7]; H11M0008-24 [ICS,7]
IPCR H01M0008-12 [I,C*]; H01M0008-12 [I,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST fuel cell module solid oxide
IT Fuel cells
(power plants; improved solid oxide fuel cells)
IT Fuel cells
(solid electrolyte; improved solid

oxide fuel cells)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 18 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 2000:589913 HCAPLUS Full-text
DOCUMENT NUMBER: 133:166288
TITLE: Planar solid oxide fuel cell stack with metallic foil interconnect
INVENTOR(S): Virkar, Anil V.; Kim, Jai-woh; Fung, Kuan-zong
PATENT ASSIGNEE(S): Gas Research Institute, USA
SOURCE: U.S., 6 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 6106967	A	20000822	US 1999-332237	1999 0614 <--
CA 2391487	A1	20001221	CA 2000-2391487	2000 0614 <--
CA 2391487	C	20090929		
WO 2000077872	A1	20001221	WO 2000-US16387	2000 0614 <--
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, UZ, VN, YU, ZA, ZW				
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG				
AU 2000057386	A	20010102	AU 2000-57386	2000 0614 <--
EP 1105929	A1	20010613	EP 2000-942816	2000 0614 <--
EP 1105929	B1	20050406		
R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO				
AT 292846	T	20050415	AT 2000-942816	2000 0614 <--

PRIORITY APPLN. INFO.: US 1999-332237 A 1999 0614 <--

WO 2000-US16387 W 2000 0614

<--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 24 Aug 2000

AB A solid oxide fuel cell stack has a plurality of integral component fuel cell units, each integral component fuel cell unit having a porous anode layer, a porous cathode layer, and a dense electrolyte layer disposed between the porous anode layer and the porous cathode layer. The porous anode layer forms a plurality of substantially parallel fuel gas channels on its surface facing away from the dense electrolyte layer and extending from one side to the opposite side of the anode layer, and the porous cathode layer forms a plurality of substantially parallel oxidant gas channels on its surface facing away from the dense electrolyte layer and extending from one side to the opposite side of the cathode. A flexible metallic foil interconnect is provided between the porous anode and porous cathode of adjacent integral component fuel cell units.

INCL 429034000

IPCI H01M0008-12 [ICM,7]

IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-12 [N,C*]; H01M0008-12 [N,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]

NCL 429/458.000; 429/454.000; 429/465.000; 429/468.000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
Section cross-reference(s): 55

ST fuel cell stack metallic foil interconnect

IT Interconnections (electric)
Solid state fuel cells
(planar solid oxide fuel cell stack with metallic foil interconnect)

IT Superalloys
RL: DEV (Device component use); USES (Uses)
(planar solid oxide fuel cell stack with metallic foil interconnect)

IT 1313-99-1, Nickel oxide nio, uses 108916-22-9D, Lanthanum manganese strontium oxide La0.8MnSr0.2O3, O-deficient 114168-16-0, Tz-8y 157349-18-3
RL: DEV (Device component use); USES (Uses)
(planar solid oxide fuel cell stack with metallic foil interconnect)

IT 1314-23-4, Zirconia, uses
RL: DEV (Device component use); USES (Uses)
(yttria-stabilized; planar solid oxide fuel cell stack with metallic foil interconnect)

IT 1314-36-9, Yttria, uses
RL: DEV (Device component use); USES (Uses)
(zirconia stabilized with; planar solid oxide fuel cell stack with metallic foil interconnect)

OS.CITING REF COUNT: 15 THERE ARE 15 CAPLUS RECORDS THAT CITE THIS RECORD (15 CITINGS)

REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 19 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2000:440405 HCAPLUS Full-text

DOCUMENT NUMBER: 133:46191

TITLE: Solid electrolyte fuel cell modules

INVENTOR(S): Takeuchi, Shinji; Nishimura, Masayoshi; Nagata, Masakatsu; Mochizuki, Masataka; Iwasawa, Isamu

PATENT ASSIGNEE(S): Kansai Electric Power Co., Japan; Fujikura Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.

CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2000182645	A	20000630	JP 1998-356749	1998 1215
			<--	
PRIORITY APPLN. INFO.:			JP 1998-356749	1998 1215
			<--	

ED Entered STN: 30 Jun 2000
AB The fuel cell modules have a power generating chamber containing several fuel cell assemblies, fuel gas supplying and discharging chambers above the power generating chamber, and a thermal insulator enclosing the chambers. The fuel cell has an electrolyte layer inside a cathode tube, an anode inside the electrolyte layer, and a fuel supplying-anode collector pipe inside the anode and are connected to each other without interconnectors to form the assembly. The cathodes of neighboring cells in an assembly are elec. connected by corrugated cathode collectors inserted between the cells along their length direction, the cathode collectors are connected to a cathode collector plate , and the anodes are connected through the fuel supplying-anode collector pipes and a collector plate. The cathode collectors have a stainless steel, Ni-Cr or Cr-Fe alloy substrate coated with LaCrOx or LaMnOx, and may have a Pt paste layer contacting the cathode.
IPCI H01M0008-02 [ICM,7]; H01M0008-12 [ICS,7]; H01M0008-24 [ICS,7]
IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-12 [I,C*]; H01M0008-12 [I,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid electrolyte fuel cell module
IT Solid state fuel cells
(structure of interconnector-free solid electrolyte fuel cell modules)
IT 11105-45-6 11122-73-9 12597-68-1, Stainless steel, uses
RL: DEV (Device component use); USES (Uses)
(corrugated cathode collectors for cell connection in interconnector-free solid electrolyte fuel cell modules)
IT 12777-94-5, Chromium lanthanum oxide
RL: DEV (Device component use); USES (Uses)
(lanthanum chromite coated cathode collectors for cell connection in interconnector -free solid electrolyte fuel cell modules)
IT 61115-22-8, Lanthanum manganese oxide
RL: DEV (Device component use); USES (Uses)
(lanthanum manganite coated cathode collectors for cell connection in interconnector -free solid electrolyte fuel cell modules)

L87 ANSWER 20 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:161391 HCAPLUS Full-text
DOCUMENT NUMBER: 130:299332
TITLE: Investigations of the long-term behavior of high-temperature fuel cell (SOFC) metallic interconnector materials with respect to compatibility with cathode-side contact layers
AUTHOR(S): Malkow, Thomas; Quadakkers, Willem J.; Singheiser, Lorenz; Nickel, Hubertus
CORPORATE SOURCE: Inst. Werkstoffe Verfahren Energietechnik,

Forschungszentrum Juelich G.m.b.H., Juelich, D-52425, Germany
SOURCE: Berichte des Forschungszentrums Juelich (1998), Juel-3589, 1-170 pp.
CODEN: FJBEE5; ISSN: 0366-0885
DOCUMENT TYPE: Report
LANGUAGE: German
ED Entered STN: 11 Mar 1999

AB In the present work the corrosion behavior of candidate metallic interconnector materials for SOFC applications in simulated service environments and their interaction with cathode-side contact layers were investigated. Two groups of metallic materials have been considered: Cr-ODS alloys based on the electrolyte foil concept and ferritic steels for anode supported SOFC applications. The investigations of the Cr-ODS alloys intended for operating temps. of about 950° have shown a, significant dependency of the oxidation behavior on the service environment. The oxidation behavior was not strongly affected by Y2O3 dispersion contents between 0.2 and 1%. Detns. of the oxidation behavior of the ferritic steels at temps. between 700 and 900° have shown that com. Cr steels containing up to 20% Cr, as X10CrAl 18, are not suitable for SOFC applications because of the formation of elec. insulating Al2O3 oxide scales. Of all com. steels tested, the best combination of required properties for SOFC applications was found in 22% Cr steel Crofer 22. The oxidation resistance of this steel could be improved with respect to the SOFC requirements by addns. of small amts. of reactive elements (0.1-0.5%) as Y or Ce. Investigations of the elec. contact resistance and the interactions of the interconnector materials with cathode-side contact layers have shown that the high elec. conductivity of the perovskite contact layer materials has not been reflected in very low elec. contact resistances, because of inadequate sintering of the contact layers and poor attachment of these contact layers to the interconnector materials. Using LaCoO3 as contact material, secondary phase formation in the contact layer, reaction zone formation at the interface contact layer/alloy and crack initiation/propagation in the reaction zone caused in the different thermal expansion coeffs. were observed Contact layers based on LaSrMnO3 exhibited less interaction with the metallic component. Based on the present investigations LaMnO3 type contact layers appear to be suitable for planar SOFC designs. Furthermore, addns. of sintering additives and application of a, functional layer based on LaCrO3 can improve the sinterability and the attachment of contact layers to the interconnector material.

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST corrosion ferritic steel interconnection solid electrolyte fuel cell; chromium iron yttria interconnect corrosion thermal expansion fuel cell
IT Corrosion
(hot; thermal expansion and corrosion of ferritic steels and Cr-base ODS alloys in simulated anode and cathode gases as high-temperature fuel cell metallic interconnector materials)
IT Scale (deposits)
(oxide, formation of; thermal expansion and corrosion of ferritic steels and Cr-base ODS alloys in simulated anode and cathode gases as high-temperature fuel cell metallic interconnector materials)
IT Contact resistance
Crack initiation
Fuel cell anodes
Fuel cell cathodes
Interconnections (electric)
Solid state fuel cells
Thermal expansion
(thermal expansion and corrosion of ferritic steels and Cr-base ODS alloys in simulated anode and cathode gases as high-temperature fuel cell metallic interconnector materials)
IT Oxidation
(thermal; thermal expansion and corrosion of ferritic steels and Cr-base ODS alloys in simulated anode and cathode gases as high-temperature fuel cell metallic interconnector materials)

IT 1333-74-0, Hydrogen, uses 7440-37-1, Argon, uses 7732-18-5, Water, uses
RL: NUU (Other use, unclassified); USES (Uses)
(anode gas-containing; thermal expansion and corrosion of ferritic steels and Cr-base ODS alloys in simulated anode and cathode gases as high-temperature fuel cell metallic interconnector materials)

IT 1302-67-6, Spinel 1308-38-9, Chromia, formation (nonpreparative)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(formation of; thermal expansion and corrosion of ferritic steels and Cr-base ODS alloys in simulated anode and cathode gases as high-temperature fuel cell metallic interconnector materials)

IT 1309-37-1, Iron oxide (FE2O3), formation (nonpreparative)
RL: FMU (Formation, unclassified); FORM (Formation, nonpreparative)
(formation of; thermal expansion and corrosion of ferritic steels and Cr-base ODS alloys in simulated anode and cathode gases as high-temperature solid- oxide fuel cell metallic interconnector materials)

IT 12611-79-9, Nirosta 4006 12743-96-3, X10CrAl18 12743-97-4, Ferrotherm 4762 12745-19-6, E-Brite 39366-96-6, Sandvik 4C54 51569-64-3, Ferrotherm 4713 56712-91-5, Ferrotherm 4724 82047-94-7, Al29-4C 186672-90-2, Cr5Fe1Y2O3 223394-54-5, Cr5Fe0.5Y2O3 223394-55-6, Cr5Fe0.2Y2O3 223394-56-7, Crofer 22 223394-57-8, Crofer 18Hf 223394-58-9, Fe25CrMn
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PRP (Properties); PROC (Process); USES (Uses)
(thermal expansion and corrosion of ferritic steels and Cr-base ODS alloys in simulated anode and cathode gases as high-temperature fuel cell metallic interconnector materials)

REFERENCE COUNT: 259 THERE ARE 259 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 21 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1999:74547 HCAPLUS Full-text
DOCUMENT NUMBER: 130:112695
TITLE: Tubular solid electrolyte fuel cells
INVENTOR(S): Tateishi, Yuji
PATENT ASSIGNEE(S): Kyocera Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 11026000	A	19990129	JP 1997-173845	1997 0630 <--
JP 3405659	B2	20030512		

PRIORITY APPLN. INFO.: JP 1997-173845 1997 0630 <--

ED Entered STN: 04 Feb 1999

AB The fuel cells have a cathode and an anode on the opposite sides of a tubular solid electrolyte, an interconnector elec contacting the cathode or anode, and a 0.3-15 μm thick plated metal layer on the surface of the interconnector.
IPCI H01M0008-02 [ICM,6]; H01M0008-12 [ICS,6]
IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-12 [I,C*]; H01M0008-12 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST tubular solid electrolyte fuel cell interconnector; fuel cell metal plated interconnector
IT Solid state fuel cells
(tubular solid electrolyte fuel cells metal plated calcium lanthanum chromite interconnectors)
IT 7440-02-0, Nickel, uses 219655-03-5, Calcium chromium lanthanum oxide (Ca0.21Cr3La0.8O3)
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(tubular solid electrolyte fuel cells metal plated calcium lanthanum chromite interconnectors)

L87 ANSWER 22 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:768961 HCAPLUS Full-text
DOCUMENT NUMBER: 128:50750
ORIGINAL REFERENCE NO.: 128:9913a,9916a
TITLE: Manufacture of solid electrolyte fuel cells
INVENTOR(S): Hishinuma, Yuichi; Matsuzaki, Yoshio; Ogihara, Takashi
PATENT ASSIGNEE(S): Tokyo Gas Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09306514	A	19971128	JP 1996-115052	1996 0509 <--

PRIORITY APPLN. INFO.: JP 1996-115052 1996 0509 <--
ED Entered STN: 10 Dec 1997
AB Solid electrolyte fuel cells containing in serial connected planar unit cells, having a (La1-pMp)(Mn1-qM1q)O3 (M = Sr, Ba, and/or Ca; M1 = Cr, Ni, Mg, Co, Zr, Ce, Fe, and/or Al; p ≤0.50; q ≤0.05) cathode and an anode on the opposite sides of an electrolyte plate, stacked alternately with (La1-xM2x)(Cr1-yM3y)O3 (M2 = Sr, Ba, and/or Ca; M3 = Cr, Ni, Mg, Co, Zr, Ce, Fe, and/or Al; x ≤0.50, yr ≤0.50) separators are prepared by coating (La1-pMp)(Mn1-qM1q)O3 on the separator, sintering, applying a (La1-pMp)(Mn1-qM1q)O3 binder layer between the separator and the cathode, sintering at 1000-1500° o bond the cathode to the separator. These fuel cells have low internal resistance.
IPCI H01M0008-02 [ICM,6]; H01M0004-86 [ICS,6]; H01M0004-88 [ICS,6]; H01M0004-90 [ICS,6]; H01M0008-12 [ICS,6]
IPCR H01M0004-86 [I,C*]; H01M0004-86 [I,A]; H01M0004-88 [I,C*]; H01M0004-88 [I,A]; H01M0004-90 [I,C*]; H01M0004-90 [I,A]; H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-12 [I,C*]; H01M0008-12 [I,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid electrolyte fuel cell manuf;

lanthanum manganate cathode fuel cell manuf; lanthanum chromate separator fuel cell manuf

IT Solid state fuel cells
(manufacture of solid electrolyte fuel cells with composition transition binder layers between cathode and electrolyte layers)

IT 108916-21-8, Lanthanum manganese strontium oxide (La0.6MnSr0.4O3) 120605-82-5, Lanthanum manganese strontium oxide (La0.85MnSr0.15O3) 200133-61-5
RL: DEV (Device component use); PEP (Physical, engineering or chemical process); PROC (Process); USES (Uses)
(manufacture of solid electrolyte fuel cells with composition transition binder layers between cathode and electrolyte layers)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L87 ANSWER 23 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:433453 HCAPLUS Full-text
DOCUMENT NUMBER: 127:68520
ORIGINAL REFERENCE NO.: 127:13043a,13046a
TITLE: Unit cells for solid electrolyte fuel cells
INVENTOR(S): Nishihara, Masahito; Akiyama, Masahide
PATENT ASSIGNEE(S): Kyocera Corp., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 7 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09129245	A	19970516	JP 1995-283830	1995 1031 <--

PRIORITY APPLN. INFO.: JP 1995-283830 1995 1031 <--

ED Entered STN: 12 Jul 1997

AB The unit cells have a cathode and an anode on the opposite sides of a solid electrolyte and a collector connected to 1 of the electrodes, where the anode is composed of ZrO2 and/or CeO2 and a metal selected from Mi, Co, Ti, and W with the oxide on the anode surface having greater average particle size than those contacting the electrolyte. These cells have long lifetime. IPCI H01M0004-86 [ICM,6]; H01M0008-02 [ICS,6]

IPCR H01M0004-86 [I,C*]; H01M0004-86 [I,A]; H01M0008-02 [I,C*]; H01M0008-02 [I,A]

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST solid electrolyte fuel cell anode; zirconia size distribution fuel cell anode; ceria size distribution fuel cell anode; particle size distribution fuel cell anode

IT Fuel cell anodes
(size distribution of oxide particles in oxide-metal anodes for solid electrolyte fuel cells)

IT 7440-02-0, Nickel, uses 7440-32-6, Titanium, uses 7440-33-7, Tungsten, uses 7440-48-4, Cobalt, uses 67338-79-8, Cerium yttrium oxide (Ce19Y2O41) 106830-29-9, Yttrium zirconium oxide (Y0.2Zr0.9O2.1)
RL: DEV (Device component use); PRP (Properties); USES (Uses)

(size distribution of oxide particles in oxide-metal anodes for solid electrolyte fuel cells)

L87 ANSWER 24 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1997:405713 HCAPLUS Full-text
DOCUMENT NUMBER: 127:37132
ORIGINAL REFERENCE NO.: 127:7091a,7094a
TITLE: Solid electrolyte fuel cells with mechanical seals
INVENTOR(S): Hishinuma, Yuchi; Matsuzaki, Yoshio
PATENT ASSIGNEE(S): Tokyo Gas Co., Ltd., Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 4 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 09115530	A	19970502	JP 1995-269584	1995 1018 <--

PRIORITY APPLN. INFO.: JP 1995-269584 1995 1018 <--

ED Entered STN: 02 Jul 1997
AB The fuel cells have in series connected unit cells, gas distributing separators stacked alternately with the cells, and metal mesh or felt between the anodes and the fuel gas passages on the separators; where the separators have recessed areas at their edges on the upper surface fit in the protruded areas at the edges on the bottom surface of a neighboring separator to form mech. seals. The seals may also contain heat resistant metal gasket between the separators and the electrolyte plates of the cells. The gasket may be Cr-Fe alloys containing ≥3% Al and may be coated with Al2O3, ZrO2, and CeO2. The separators may have an insulator substrate, e.g., Al2O3 or MgO-Mg aluminate composite, laminated. with a conductivity oxide. IPCI H01M0008-02 [ICM,6]
IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid electrolyte fuel cell mech seal; chromium iron alloy gasket fuel cell; alumina conductive oxide fuel cell separator; magnesia magnesium aluminate fuel cell separator
IT Oxides (inorganic), uses
RL: DEV (Device component use); USES (Uses)
(conductive; separators with alumina or magnesia-magnesium aluminate substrates laminated with conductive oxide for solid electrolyte fuel cells)
IT Seals (parts)
(gas; structure of mech. seals for solid electrolyte fuel cells)
IT Fuel cell separators
(separators with alumina or magnesia-magnesium aluminate substrates laminated with conductive oxide for solid electrolyte fuel cells)
IT Fuel cells
(structure of mech. seals for solid electrolyte fuel cells)
IT Gaskets
(structure of solid electrolyte fuel

cells containing aluminum containing chromium-iron alloy gaskets)
IT 1344-28-1, Alumina, uses
RL: DEV (Device component use); USES (Uses)
(aluminum containing chromium-iron alloy gaskets with alumina coatings for solid electrolyte fuel cells)
IT 1306-38-3, Ceria, uses
RL: DEV (Device component use); USES (Uses)
(aluminum containing chromium-iron alloy gaskets with ceria coatings for solid electrolyte fuel cells)
IT 1314-23-4, Zirconia, uses
RL: DEV (Device component use); USES (Uses)
(aluminum containing chromium-iron alloy gaskets with zirconia coatings for solid electrolyte fuel cells)
IT 1309-48-4, Magnesia, uses 11137-98-7, Magnesium aluminate
RL: DEV (Device component use); USES (Uses)
(separators with alumina or magnesia-magnesium aluminate substrates laminated with conductive oxide for solid electrolyte fuel cells)
IT 7429-90-5, Aluminum, uses 11133-82-7
RL: DEV (Device component use); USES (Uses)
(structure of solid electrolyte fuel cells containing aluminum containing chromium-iron alloy gaskets)
OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L87 ANSWER 25 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1993:521264 HCAPLUS Full-text
DOCUMENT NUMBER: 119:121264
ORIGINAL REFERENCE NO.: 119:21735a,21738a
TITLE: Solid-oxide electrolyte fuel cells
INVENTOR(S): Nishida, Kunio; Takagi, Hiroshi
PATENT ASSIGNEE(S): Murata Manufacturing Co, Japan
SOURCE: Jpn. Kokai Tokkyo Koho, 5 pp.
CODEN: JKXXAF
DOCUMENT TYPE: Patent
LANGUAGE: Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 05094828	A	19930416	JP 1991-256799	1991 1003 <--
JP 3151872	B2	20010403		

PRIORITY APPLN. INFO.: JP 1991-256799 1991 1003 <--
ED Entered STN: 18 Sep 1993
AB The fuel cells comprise a solid- oxide electrolyte plate, having an anode and a cathode on the opposite sides, stacked with distributors, and interconnectors; where the interconnector has an electrolyte-based perforated substrate , an nonionic conductive material on the surface of or inside the substrate, and a conductive material coated on the both sides and filled in the holes of the substrate . The electrolyte is preferably a ZrO2-based material, and the nonionic conductive material is La2Mn2O7. IPCI H01M0008-02 [ICM,5]; H01M0008-12 [ICS,5]

IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-12 [I,C*]; H01M0008-12 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST solid electrolyte fuel cell interconnector
IT Fuel cells
(solid-state, interconnectors for, structure of)
IT 1314-23-4, Zirconia, uses
RL: USES (Uses)
(electrolytes, interconnectors containing, structure of, for fuel cell)
IT 149661-80-3, Lanthanum manganese oxide (La2Mn2O7)
RL: USES (Uses)
(interconnectors containing, structure of, for solid-electrolyte fuel cells)

L87 ANSWER 26 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1993:499867 HCAPLUS Full-text
DOCUMENT NUMBER: 119:99867
ORIGINAL REFERENCE NO.: 119:17929a,17932a
TITLE: Cell units for solid-oxide fuel cells and powder generators using units
INVENTOR(S): Soma, Takao; Kawasaki, Shinji; Yoshioka, Katsuki
PATENT ASSIGNEE(S): NGK Insulators, Ltd., Japan
SOURCE: Eur. Pat. Appl., 37 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 536925	A1	19930414	EP 1992-308752	1992 0925
			<--	
EP 536925	B1	19970730		
R: DE, FR, GB				
JP 05089890	A	19930409	JP 1991-249619	1991 0927
			<--	
JP 2758520	B2	19980528		
JP 05166518	A	19930702	JP 1991-328697	1991 1212
			<--	
JP 2783926	B2	19980806		
JP 05166529	A	19930702	JP 1991-328698	1991 1212
			<--	
US 5292599	A	19940308	US 1992-948011	1992 0902
			<--	
EP 740358	A2	19961030	EP 1996-110285	1992 0925
			<--	
EP 740358	B1	20030903		

R: DE, FR, GB
PRIORITY APPLN. INFO.: JP 1991-249619 A 1991 0927 <--
JP 1991-328697 A 1991 1212 <--
JP 1991-328698 A 1991 1212 <--
EP 1992-308752 A 1992 0925 <--
ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
ED Entered STN: 04 Sep 1993
AB The units have a laminate structure including a cell element and a separator. The cell element includes a dense and planar solid electrolyte of a rectangular plane shape, and an air cathode film and a fuel anode film provided on the opposite surfaces of the electrolyte. The separator is made of a dense electron conductor. A plurality of oxidizing gas flow paths is defined between the separator and the cathode, and the ratio of the long side:the short side of the rectangular cell element is ≥2. The power generators comprise a plurality of cell units arranged at a given interval and include a fuel-gas chamber, a power-generating chamber, a combustion chamber, and an oxidizing-gas chamber. The anodes and opening of a plurality of the cell units are arranged in substantially the same directions, the anode of each of the cell units is connected to the separator of the vertically adjacent cell unit in series by a heat-resistant conductor not interrupting flowing of a gas, and the separators of the laterally adjacent cell units are connected to each other in parallel through a similar conductor and in a similar way.
IPCI H01M0008-00 [ICM,5]; H01M0008-24 [ICS,5]
IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-12 [N,C*]; H01M0008-12 [N,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST fuel cell power generator
IT Fuel cells
(power plants, design of)
OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

L87 ANSWER 27 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1992:534462 HCAPLUS Full-text
DOCUMENT NUMBER: 117:134462
ORIGINAL REFERENCE NO.: 117:23291a,23294a
TITLE: Composite membranes and solid-oxide fuel cells containing them
INVENTOR(S): Kendall, Kevin
PATENT ASSIGNEE(S): Imperial Chemical Industries PLC, UK
SOURCE: Eur. Pat. Appl., 11 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 482783	A2	19920429	EP 1991-309159 <--	1991 1007
EP 482783	A3	19930414		

R: BE, DE, FR, GB, IT, NL

AU 9185816	A	19920430	AU 1991-85816	1991 1015 <--
AU 644905	B2	19931223		
CA 2053614	A1	19920425	CA 1991-2053614	1991 1017 <--
US 5190834	A	19930302	US 1991-780204	1991 1022 <--
JP 05182677	A	19930723	JP 1991-275278	1991 1023 <--
PRIORITY APPLN. INFO.:			GB 1990-23091 A	1990 1024 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 04 Oct 1992

AB A corrugated, spiral-shape, or tubular membrane comprises ≥1 traverse domain of an electrolyte material and ≥1 traverse domain of an electronically conducting interconnect material, with both the electrolyte and the interconnector materials exposed on both major faces of the membrane. The fuel cells include ≥1 composite membrane with anode(s) and cathode(s) arranged on the opposite sides of the membrane. The membrane is prepared by sep. dispersing a particulate electrolyte material (stabilized ZrO2) and a particulate interconnecting material (doped LaCrO3) in a polymer-based binder to form pastes, forming the pastes into a cohesive precursor membrane, removing the binder, and sintering. IPCI H01M0008-12 [ICM,5]; H01M0008-24 [ICS,5]

IPCR H01M0008-02 [I,C*]; H01M0008-02 [I,A]; C04B0035-486 [I,C*]; C04B0035-486 [I,A]; G01N0027-407 [I,C*]; G01N0027-407 [I,A]; H01M0006-18 [I,C*]; H01M0006-18 [I,A]; H01M0008-12 [I,C*]; H01M0008-12 [I,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

ST fuel cell electrolyte interconnect membrane; zirconia lanthanum chromite membrane

IT Fuel-cell electrolytes
(stabilized zirconia, membranes, containing electronically conducting interconnecting materials)

IT 12017-94-6, Chromium lanthanum oxide (CrLaO3)
RL: USES (Uses)
(calcium- or strontium-doped, interconnectors, membranes containing zirconia electrolyte and, for fuel cells)

IT 7440-24-6, Strontium, uses 7440-70-2, Calcium, uses
RL: USES (Uses)
(lanthanum chromite or lanthanum manganite doped with, membranes containing zirconia electrolyte and, for fuel cells)

IT 1314-23-4, Zirconia, uses
RL: USES (Uses)
(yttria-stabilized, electrolyte, membranes containing electronically interconnect materials and, for fuel cells)

IT 1314-36-9, Yttria, uses
RL: USES (Uses)
(zirconia stabilized with, electrolyte, membranes containing electronically interconnect materials and, for fuel cells)

OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE

THIS RECORD (24 CITINGS)

L87 ANSWER 28 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1989:636656 HCAPLUS Full-text
DOCUMENT NUMBER: 111:236656
ORIGINAL REFERENCE NO.: 111:39271a,39274a
TITLE: Manufacture of monolithic solid-oxide fuel-cell stack
INVENTOR(S): Maricle, Donald L.; Buswell, Richard F.
PATENT ASSIGNEE(S): International Fuel Cells Corp., USA
SOURCE: U.S., 8 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4857420	A	19890815	US 1987-107817	1987 1013 <--

PRIORITY APPLN. INFO.: US 1987-107817 1987 1013 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
ED Entered STN: 23 Dec 1989
AB The stack is prepared by forming a plurality of electrode subassemblies and a plurality of gas separator-reactor flow field subassemblies, stacking these subassemblies alternately with the cathode material layer abutting the cathode- and the anode material layer abutting the anode-flow field layers, heating the obtained preassembly to a subsintering temperature to soften and creep flatten the subassemblies and to form an intimate interfacial contact between them, and by applying a light compressive load axially of the preassembly during the heating step to fuse the subassemblies together. The electrode subassemblies are formed by providing appropriately sized green unsintered tapes of solid-oxide electrolyte material, sintering the tapes at .apprx.1400-1600° to form sintered plates of appropriate operational d., and by forming a finished layer of anode material on 1 and a finished layer of cathode material on the opposite surface of the sintered electrolyte plate. The other subassemblies are formed by providing appropriately sized green unsintered sheets of interconnect material; sintering the sheets at .apprx.1650-1750° to form laminae of appropriate operational d.; forming a finished anode-flow field layer, including a plurality of parallel ribs and intervening grooves extending across the laminae, on 1 surface of the laminae, in a 1st direction; and by forming similarly a finished cathode-flow field layer on the opposite surface of the laminae, extending in a direction perpendicular to the 1st direction.
INCL 429030000
IPCI H04M0008-10 [ICM]; B05D0005-12 [ICS]
IPCR H01M0008-24 [I,C*]; H01M0008-24 [I,A]
NCL 429/495.000; 029/623.500; 427/115.000; 429/514.000; 429/535.000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST fuel cell stack monolithic manuf; oxide fuel cell stack monolithic
IT Fuel cells
(solid-oxide, stacks, manufacture of monolithic)
OS.CITING REF COUNT: 24 THERE ARE 24 CAPLUS RECORDS THAT CITE THIS RECORD (24 CITINGS)
REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 29 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1984:614083 HCAPLUS Full-text

DOCUMENT NUMBER: 101:214083
ORIGINAL REFERENCE NO.: 101:32423a,32426a
TITLE: Integral manifolding structure for a fuel cell core having a parallel gas flow
INVENTOR(S): Herceg, Joseph E.
PATENT ASSIGNEE(S): United States Dept. of Energy, USA
SOURCE: U.S., 14 pp.
CODEN: USXXAM
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 4476197	A	19841009	US 1983-541178	1983 1012 <--
US 541178	A0	19841109		

PRIORITY APPLN. INFO.: US 1983-541178 1983 1012 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
ED Entered STN: 29 Jun 2007
AB Manifolding means for directing the fuel and oxidant gases to parallel flow passageways in a fuel cell core are disclosed. Each core passageway is defined by electrolyte and interconnect walls. Each electrolyte (ZrO_2 + Y_2O_3) and interconnect wall ($LaCrO_3$) consists resp. of anode (Co + ZrO_2 + Y_2O_3) and cathode ($LaMnO_3$) materials layered on the opposite sides of electrolyte material, or on the opposite sides of interconnect material. A core wall projects beyond the open ends of the defined core passageways and is disposed approx. midway between and parallel to the adjacent overlaying and underlying interconnect walls to define manifold chambers between them on opposite sides of the wall. Each electrolyte wall defining the flow passageways is shaped to blend into and be connected to this wall to redirect the corresponding fuel and oxidant passageways to the resp. manifold chambers either above or below this intermediate wall. Inlet and outlet connections are made to these sep. manifold chambers resp., for carrying the fuel and oxidant gases to the core, and for carrying their reaction products away from the core.
INCL 429032000
IPCI H01M0008-10 [ICM]
IPCR H01M0008-24 [I,C*]; H01M0008-24 [I,A]
NCL 429/456.000; 429/488.000; 429/513.000
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST fuel cell integral manifolding structure
IT Fuel cells
(solid-oxide, with parallel gas flow, integral manifolding structure for)
IT 12031-12-8
RL: USES (Uses)
(cathodes, fuel-cell)
IT 7440-48-4, uses and miscellaneous
RL: USES (Uses)
(fuel-cell anodes from mixture of yttria-zirconia-)
IT 1314-23-4, uses and miscellaneous
RL: USES (Uses)
(fuel-cell electrolyte from yttria-stabilized)
IT 1314-36-9, uses and miscellaneous
RL: USES (Uses)
(fuel-cell electrolyte from zirconia stabilized with)
IT 12017-94-6

RL: USES (Uses)
(fuel-cell interconnect wall)
OS.CITING REF COUNT: 14 THERE ARE 14 CAPLUS RECORDS THAT CITE THIS RECORD (14 CITINGS)
REFERENCE COUNT: 10 THERE ARE 10 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L87 ANSWER 30 OF 30 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER: 1983:615829 HCAPLUS Full-text
DOCUMENT NUMBER: 99:215829
ORIGINAL REFERENCE NO.: 99:33189a,33192a
TITLE: Electrical generators of the fuel cell type
INVENTOR(S): Isenberg, Arnold Otto
PATENT ASSIGNEE(S): Westinghouse Electric Corp., USA
SOURCE: Eur. Pat. Appl., 13 pp.
CODEN: EPXXDW
DOCUMENT TYPE: Patent
LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 89852	A1	19830928	EP 1983-301602	1983 0322
			<--	
EP 89852	B1	19860827		
R: DE, FR, GB, IT, NL				
US 4431715	A	19840214	US 1982-361286	1982 0324
			<--	
JP 58175267	A	19831014	JP 1983-44030	1983 0315
			<--	
JP 04043388	B	19920716		
PRIORITY APPLN. INFO.:			US 1982-361286 A	1982 0324
			<--	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
ED Entered STN: 12 May 1984
AB A high-temperature solid oxide electrolyte -type fuel-cell generator with an elec. connection of the fuel cell electrodes to the elec. output bus, which is brought through the generator housing to be connected to an elec. load line, maintains a highly uniform temperature distribution. The elec. connection includes an electrode bus which is spaced parallel to the output bus with a plurality of sym. spaced transversely extending conductors extending between the electrode bus and the output bus, with thermal insulation provided about the transverse conductors between the spaced apart buses. Single or plural stages of the insulated transversely extending conductors can be provided within the high-temperature regions of the fuel-cell generator to provide highly homogeneous temperature distribution over the contacting surfaces.
IPCI H01M0008-12 [ICM]; H01M0008-24 [ICS]; H01M0002-20 [ICS]
IPCR H01M0008-12 [I,C*]; H01M0008-12 [I,A]; H01M0002-20 [I,C*]; H01M0002-20 [I,A]; H01M0008-02 [I,C*]; H01M0008-02 [I,A]; H01M0008-24 [I,C*]; H01M0008-24 [I,A]
CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)
ST fuel cell elec generator
IT Fuel cells
(solid oxide electrolyte, of uniform temperature distribution)

OS.CITING REF COUNT: 9 THERE ARE 9 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITINGS)

FULL SEARCH HISTORY

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=> d his nofile

     (FILE 'HOME' ENTERED AT 15:01:27 ON 09 NOV 2010)

     FILE 'HCAPLUS' ENTERED AT 15:01:33 ON 09 NOV 2010
                E US20070248864/PN
L1            1 SEA SPE=ON  ABB=ON  PLU=ON  US20070248864/PN
                D ALL
                D SCA

     FILE 'STNGUIDE' ENTERED AT 15:03:28 ON 09 NOV 2010

     FILE 'HCAPLUS' ENTERED AT 15:04:48 ON 09 NOV 2010
                SEL L1 AU
L2          776 SEA SPE=ON  ABB=ON  PLU=ON  ("MIKAMI, KOICHI"/AU OR
                "SAKAMOTO, HIROTOSHI"/AU OR "YOSHIKATA, KUNIAKI"/AU)

     FILE 'ZCAPLUS' ENTERED AT 15:05:29 ON 09 NOV 2010
L3              QUE SPE=ON  ABB=ON  PLU=ON  MIKAMI K?/AU
L4              QUE SPE=ON  ABB=ON  PLU=ON  SAKAMOTO H?/AU
L5              QUE SPE=ON  ABB=ON  PLU=ON  YOSHIKATA K?/AU
L6              QUE SPE=ON  ABB=ON  PLU=ON  L3 AND L4 AND L5

     FILE 'HCAPLUS' ENTERED AT 15:07:34 ON 09 NOV 2010
L7            4 SEA SPE=ON  ABB=ON  PLU=ON  L3 AND L4 AND L5
                D SCA
                E FUEL CELLS/CT 25
L8        16396 SEA SPE=ON  ABB=ON  PLU=ON  FUEL?(6A)CELL?(6A)SOLID?(6A
                )OXID?
L9        16030 SEA SPE=ON  ABB=ON  PLU=ON  (FUEL?(3A)CELL?)(L)(SOLID?(
                2A)OXID?)
L10       16595 SEA SPE=ON  ABB=ON  PLU=ON  L8 OR L9
L11      118100 SEA SPE=ON  ABB=ON  PLU=ON  FUEL?(2A)CELL?
L12             QUE SPE=ON  ABB=ON  PLU=ON  SUBSTRAT? OR SURFACE? OR
                BASE# OR SUBSTRUCT? OR UNDERSTRUCTUR? OR UNDERLAY? OR
                FOUNDATION? OR PANE? OR DISK? OR DISC# OR WAFER? OR
                PLATE OR PLATES
L13           1 SEA SPE=ON  ABB=ON  PLU=ON  L1 AND L10
                D SCA
                D KWIC
L14             QUE SPE=ON  ABB=ON  PLU=ON  ELECTROLYT?
L15        8851 SEA SPE=ON  ABB=ON  PLU=ON  L10 AND L12
L16        4809 SEA SPE=ON  ABB=ON  PLU=ON  L15 AND L14
L17             QUE SPE=ON  ABB=ON  PLU=ON  ELECTROD? OR CATHOD? OR
                ANOD? OR ELECTROD?(2A)(POSITIVE OR NEGATIVE)
L18        3633 SEA SPE=ON  ABB=ON  PLU=ON  L16 AND L17
L19        1528 SEA SPE=ON  ABB=ON  PLU=ON  L18 AND (CATHOD? OR
                ELECTROD?(2A)POSITIVE) AND (ANOD? OR ELECTROD?(2A)NEGAT
                IVE)
L20           0 SEA SPE=ON  ABB=ON  PLU=ON  L1 AND L19
L21           1 SEA SPE=ON  ABB=ON  PLU=ON  L1 AND L18
                D KWIC
L22        3633 SEA SPE=ON  ABB=ON  PLU=ON  L18 OR L19
L23             QUE SPE=ON  ABB=ON  PLU=ON  (SAME OR OPPOSITE)(3A)(SIDE
                 OR SURFACE)
L24          77 SEA SPE=ON  ABB=ON  PLU=ON  L22 AND L23
L25             QUE SPE=ON  ABB=ON  PLU=ON  (SPACE OR DISTAN? OR
                LENGTH OR SEPARAT?)(3A)(MEASUR? OR PREDETERMIN? OR
                DETERMIN? OR SPECIF? OR EQUAL? OR EQUI? OR UNIFORM?)
L26             QUE SPE=ON  ABB=ON  PLU=ON  EQUIDIS? OR EQUI?(A)DISTAN?
                 OR EQUIDISTAN?
L27           9 SEA SPE=ON  ABB=ON  PLU=ON  L22 AND (L25 OR L26)
                D QUE
L28           0 SEA SPE=ON  ABB=ON  PLU=ON  L24 AND L27
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L29          86 SEA SPE=ON  ABB=ON  PLU=ON  L24 OR L27
L30             QUE SPE=ON  ABB=ON  PLU=ON  SPACE? OR SPACING? OR
                DISTAN? OR LENGTH? OR SEPARAT? OR MEASUR? OR PREDETERMI
                N? OR DETERMIN? OR SPECIF? OR EQUAL? OR EQUI? OR
                UNIFORM? OR EQUI?(A)DISTAN? OR EQUIDISTAN?
L31        1579 SEA SPE=ON  ABB=ON  PLU=ON  L22 AND L30
L32          48 SEA SPE=ON  ABB=ON  PLU=ON  L29 AND L31
L33          86 SEA SPE=ON  ABB=ON  PLU=ON  L29 OR L32
L34           1 SEA SPE=ON  ABB=ON  PLU=ON  L1 AND L33
                D KWIC
L35             QUE SPE=ON  ABB=ON  PLU=ON  ELEMENT? OR BODY? OR UNIT?
                OR ASSEMBL?
L36         370 SEA SPE=ON  ABB=ON  PLU=ON  L31 AND L35
L37          21 SEA SPE=ON  ABB=ON  PLU=ON  L36 AND L33
                D KWIC
L38           1 SEA SPE=ON  ABB=ON  PLU=ON  L1 AND L37
                D KWIC
L39          86 SEA SPE=ON  ABB=ON  PLU=ON  L33 OR L37
L40             QUE SPE=ON  ABB=ON  PLU=ON  INSULAT?
L41           4 SEA SPE=ON  ABB=ON  PLU=ON  L39 AND L40
L42          52 SEA SPE=ON  ABB=ON  PLU=ON  L31 AND L40
L43         135 SEA SPE=ON  ABB=ON  PLU=ON  L37 OR L39 OR L41 OR L42
L44             QUE SPE=ON  ABB=ON  PLU=ON  PLURAL? OR MULTI? OR
                SEVERAL? OR MANY
L45          39 SEA SPE=ON  ABB=ON  PLU=ON  L43 AND L44
L46         105 SEA SPE=ON  ABB=ON  PLU=ON  L39 OR L41 OR L45
L47         135 SEA SPE=ON  ABB=ON  PLU=ON  L46 OR L43
L48             QUE SPE=ON  ABB=ON  PLU=ON  PRINT?
L49           8 SEA SPE=ON  ABB=ON  PLU=ON  L47 AND L48
L50             QUE SPE=ON  ABB=ON  PLU=ON  ADHESI? OR ADHERE? OR
                STICK? OR CLING? OR BOND? OR CEMENT? OR CONGLUTIN? OR
                AGGLUTIN? OR MUCILAG? OR TACK? OR GLUE? OR GLUING OR
                PASTE? OR PASTING OR GUM? OR HOLD? OR GRIP? OR GRASP?
                OR BIND? OR SEAL?
L51          34 SEA SPE=ON  ABB=ON  PLU=ON  L47 AND L50
L52             QUE SPE=ON  ABB=ON  PLU=ON  GROOVE? OR FURROW? OR
                CLEFT#### OR GRID? OR MESH### OR SCORE## OR INDENT? OR
                INCIS? OR STRIAT? OR GOUGE? OR TRENCH? OR TROUGH? OR
                RUT#### OR RIBBED?
L53             QUE SPE=ON  ABB=ON  PLU=ON  CHANNEL? OR CONDUIT? OR
                DUCT? OR PASSAGE? OR TROUGH? OR TUNNEL?
L54          38 SEA SPE=ON  ABB=ON  PLU=ON  L47 AND (L52 OR L53)
L55         135 SEA SPE=ON  ABB=ON  PLU=ON  L47 OR L49 OR L51 OR L54
L56             QUE SPE=ON  ABB=ON  PLU=ON  DISPOS? OR ATTACH? OR
                ADHER? OR ADSOR? OR ABSOR? OR PART? OR ADJ? OR SINGL?
L57          66 SEA SPE=ON  ABB=ON  PLU=ON  L55 AND L56
L58             QUE SPE=ON  ABB=ON  PLU=ON  CONNECT? OR INTERCONNECT?
                OR INTER?(A)CONNECT?
L59         135 SEA SPE=ON  ABB=ON  PLU=ON  L55 OR L57
L60          49 SEA SPE=ON  ABB=ON  PLU=ON  L59 AND L58
L61         112 SEA SPE=ON  ABB=ON  PLU=ON  L60 OR L39
L62           1 SEA SPE=ON  ABB=ON  PLU=ON  L1 AND L61
                D SCA
                D KWIC
L63         135 SEA SPE=ON  ABB=ON  PLU=ON  L59 OR L60 OR L61
L64          10 SEA SPE=ON  ABB=ON  PLU=ON  L63 AND ((L2 OR L3 OR L4
                OR L5 OR L6 OR L7))
                SAV TEMP L64 WEI789HCPIN/A
                D SCA
L65             QUE SPE=ON  ABB=ON  PLU=ON  FUELCELL? OR (FUEL?(2A)CELL
                ?) OR FC OR SOFC OR DFC OR PEMFC
L66         135 SEA SPE=ON  ABB=ON  PLU=ON  L63 AND L65
L67          10 SEA SPE=ON  ABB=ON  PLU=ON  L64 AND L66
                SAV TEMP L67 WEI789HCPIN/A
L68         125 SEA SPE=ON  ABB=ON  PLU=ON  L66 NOT L67
                D L1 PRAI
L69             QUE SPE=ON  ABB=ON  PLU=ON  PY=<2005 NOT P/DT
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L70             QUE SPE=ON  ABB=ON  PLU=ON  (PY=<2005 OR PRY=<2005 OR
                AY=<2005 OR MY=<2005 OR REVIEW/DT) AND P/DT
L71          79 SEA SPE=ON  ABB=ON  PLU=ON  L68 AND (L69 OR L70)
L72          30 SEA SPE=ON  ABB=ON  PLU=ON  L71 AND L58
L73          55 SEA SPE=ON  ABB=ON  PLU=ON  L71 AND L33
L74          67 SEA SPE=ON  ABB=ON  PLU=ON  L72 OR L73
L75          18 SEA SPE=ON  ABB=ON  PLU=ON  L72 AND L73
L76          55 SEA SPE=ON  ABB=ON  PLU=ON  L73 AND (L23 OR L25 OR L26
                OR L48 OR L50)
L77          55 SEA SPE=ON  ABB=ON  PLU=ON  L76 AND L14 AND L17 AND
                L12
L78          55 SEA SPE=ON  ABB=ON  PLU=ON  L76 AND L14
L79          55 SEA SPE=ON  ABB=ON  PLU=ON  L76 AND L17
L80          55 SEA SPE=ON  ABB=ON  PLU=ON  L76 AND L12
L81          51 SEA SPE=ON  ABB=ON  PLU=ON  L80 AND L23
L82          51 SEA SPE=ON  ABB=ON  PLU=ON  L80 AND (SAME OR OPPOS?)
L83          51 SEA SPE=ON  ABB=ON  PLU=ON  L81 OR L82
L84          52 SEA SPE=ON  ABB=ON  PLU=ON  L83 OR L75
L85          18 SEA SPE=ON  ABB=ON  PLU=ON  L84 AND (L72 OR L75)
L86          30 SEA SPE=ON  ABB=ON  PLU=ON  L85 OR L72 OR L75
                D SCA
L87          30 SEA SPE=ON  ABB=ON  PLU=ON  L86 AND L10
                SAV TEMP L87 WEI789HCP/A
                D QUE L67
                D L67 1-10 IBIB ED ABS HITIND
                D QUE L87
                D L87 1-30 IBIB ED ABS HITIND
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